Compact disc player **CD751/00/01/06**

Service
Service
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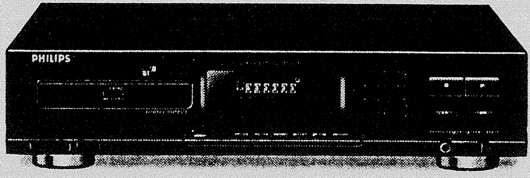

ServiceManual

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PHILIPS

PCS 83 902

TECHNICAL SPECIFICATIONS

General

1.Mains voltage	/00	: 220-230V(±10%) 50Hz
	/01	: 120/230V(±15%) 50/60Hz
	/06	: 100V(±10%) 50/60Hz
2.Mains frequency		: 50-60 Hz
3.Mains voltage selection	/00	: no
	/01	: 2 position selector(110/230V), preset is 230V
	/06	: no
4.Power consumption mains,standby		: < 3W

Line output

1.Number of channels		: 2
2.Output voltage		: 2 Vrms ± 2 dB
3.Unbalance left-right		: max. 1 dB
4.Output resistance		: 1 kΩ
5.Amplitude linearity	from 20 Hz to 20 kHz	: typ. ± 0.1 dB
		: max. ± 0.3 dB
6.Phase non-linearity	from 20 Hz to 16 kHz	: max. 7.0°
		: typ. 3.2°
7.Signal to noise ratio	from 20 Hz to 20 kHz	: min. 95 dB(typ. 100 dB)
	with digital silence kill	: min. 100 dB(from 20 Hz to 20 kHz)
8.Dynamic range (-60 dB)	1 kHz	: min. -90 dB
	from 20 Hz to 20 kHz	: min. -85 dB
9.Total harmonic distortion + noise		
	1 kHz	: 85 dB
	from 20 Hz to 20 kHz	: min. 80 dB(typ. 88 dB)
10.Intermodulation distortion	from 20 Hz to 20 kHz	: min. 70 dB(typ. 80dB)
11.Out-band attenuation		: min. 35 dB above 40 kHz
12.Channel separation	1 kHz	: min. 88 dB(typ. 90 dB)
	from 20 Hz to 20 kHz	: min. 80 dB
13.Automatic switched deemphasis with time constant 15/50 µs		
14.Non-linearity at -90 dB		: ± 1 dB(typ. 0 dB)

Variable headphone

1.Output voltage	: max. 5 Vrms ± 2 dB
2.Unbalance left-right	: max. ± 1.2 dB
3.Output resistance	: 120Ω
4.Load impedance range	: 32Ω to 600Ω load
5.Output power	: 0 to 34 mW into 32Ω load
	: 0 to 52 mW into 120Ω load
	: 0 to 29 mW into 600Ω load

Audio specs in case of 600Ω load at 4Vrms voltage output:

1.Signal to noise ratio	: typ. 80 dB (1 kHz)
2.Dynamic range	: min. 75 dB (20 Hz -20 kHz)
3.Total harmonic distortion	: min. 70 dB (20 Hz - 20 kHz)
4. Intermodulation distortion	: min 67 dB(20 Hz - 20 kHz)
5.Channel separation	: min. 70 dB (1 kHz)
	: min. 65 dB (31.5 Hz - 16 kHz)

Dimensions and weight

1.Apparatus tray closed		: WxDxH 435 x 302 x 90/106 mm
2.Apparatus tray open		: WxDxH 435 x 445 x 90/106 mm
3.Weight	in packaging	: ca. 4.0 kg
	without packaging	: ca 4.5 kg

Optical read-out system

1.Laser type	: Semiconductor AlGaAs
2.Wavelength	: 780 nm ± 20 nm
3.Light output (c.w.)	: max. 0.5 mW

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INSTALLATION

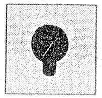
English

ACCESSORIES

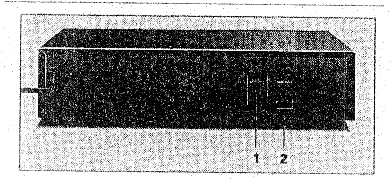
With this player are supplied:
- a connection cable;
- a remote control;
- batteries for the remote control.

POWER SUPPLY SETTING

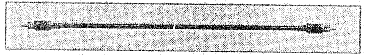
- Check that the type plate on the rear of your player indicates the correct supply voltage.
- If your mains supply voltage is different, consult your dealer or our Service Organisation.
- *Certain versions of this player are equipped with a voltage selector at the bottom of the player which enables you to set the player to the correct mains voltage yourself:*
  position 120 V – for all mains voltages between 110V and 127 V;
  position 230 V – for all mains voltages between 220V and 240 V.



CONNECTIONS

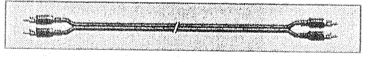


1 DIGITAL OUT
This output supplies a digital signal and can therefore only be connected to an input which is suitable for this signal.
Use here a lead with one cinch plug on either end.



Never connect this socket to a non-digital input of an amplifier, such as AUX, CD, TAPE, PHONO, etc!

2 ANALOG OUT
For the connecting cable to the amplifier.



- Insert a red plug into the 'R' socket and the other plug into the 'L' socket.
- Insert the two other plugs into the corresponding sockets of the CD or AUX input of your amplifier.
  You can also use the TUNER or TAPE IN-connection, but ***never*** the PHONO input!

FITTING A MAINS PLUG (U.K. ONLY)

This apparatus is fitted with an approved 13 Amp plug. To change a fuse in this type of plug proceed as follows:

- Remove fuse cover and fuse.
- Fix new fuse which should be a BS1362 5A, A.S.T.A. or BSI approved type.
- Refit the fuse cover.

If the fitted plug is not suitable for your socket outlets, it should be cut off and an appropriate plug fitted in its place.

If the mains plug contains a fuse, this should have a value of 5A. If a plug without a fuse is used, the fuse at the distribution board should not be greater than 5A.

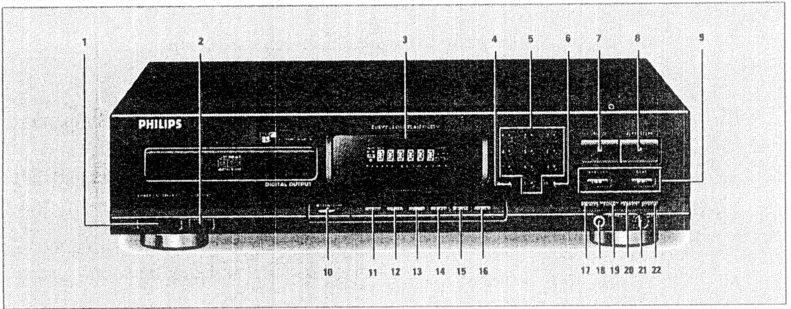
NOTE
The severed plug must be disposed to avoid a possible shock hazard should it be inserted into a 13A socket elswhere.

HOW TO CONNECT A PLUG

The wires in the mains lead are coloured in accordance with the following code:
BLUE – "NEUTRAL" ("N") and BROWN – "LIVE" ("L"). As these colours may not correspond with the colour markings identifying the terminals in your plug, proceed as follows:
- The BLUE wire must be connected to the terminal which is marked with the letter "N" or coloured BLACK.
- The BROWN wire must be connected to the terminal which is marked with the letter "L" or coloured RED.
- Do *not* connect either wires to the earth terminal in the plug which is marked by the letter "E" or by the safety earth symbol or coloured green or green-and-yellow.

Before replacing the plug cover, make certain that the cordgrip is clamped over the sheath of the lead – not simply over the two wires.

FUNCTIONAL OVERVIEW



FRONT OF PLAYER

1 **POWER ON/STANDBY** – Switching on and off.

2 **I**(nfra) **R**(ed) **SENSOR** – Receives the signals from the remote control.

3 **Display** – Informs you about the functioning of the player.

4 **PRG** (programme) – Opening and closing the memory when compiling a programme.

5 **1-0 digit keys**
- Selecting another track during play.
- Selecting a track to start play with.
- Selecting tracks when compiling a programme.
- Entering the recording time when making a tape recording.

6 **CLR** (clear)
- Erasing a programme.
- Erasing track numbers from a programme.

7 **STOP/CP**
- Stopping play.
- Erasing a programme (CP = Clear Programme).

8 **PLAY/REPLAY**
- Starting play.
- Returning to the beginning of a track.

9 **⏮◀◀ and ▶▶⏭**
- Selecting another track during play.
- Selecting a track to start play with.
- Fast search to a particular passage during play.
- Selecting the recording mode when making a tape recording.
- Selecting the recording time when making a tape recording.

10 **OPEN/CLOSE** – Opening and closing the CD compartment. The compartment also closes when the front is pressed briefly.

11 **REVIEW** – Checking a programme.

12 **EDIT** – Activating the EDIT function when making a tape recording.

13 **SCAN** – Automatically playing the beginning of each track.

14 **REPEAT** – Repeating play.

15 **SHUFFLE** – Playing in random order.

16 **TIME** – Selecting the time information you want to see.

17 **PEAK SEARCH** – Searching the loudest passage (peak) on a CD or in a programme when making a tape recording.

18 **PHONES** – Connecting headphones.

19 **FADER** – Fading in and out during play.

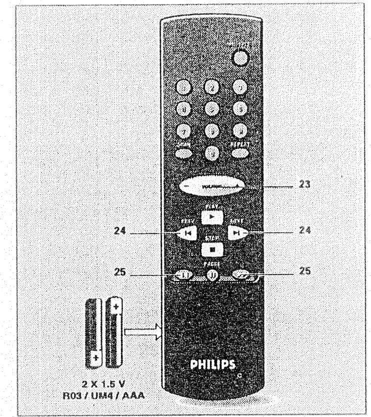
20 **AUTO SPACE** – Automatic insertion of an extra pause between tracks.

21 **LEVEL** – Adjusting the volume when listening with headphones.

22 **PAUSE** – Interrupting play.

FUNCTIONAL OVERVIEW

REMOTE CONTROL



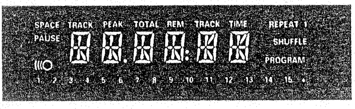
- The life of the batteries of the remote control is around one year. For replacement only use batteries of the type RO3, UM4 or AAA.
- The buttons on the remote control have the same functions as the corresponding ones on the player.
- Extra buttons:

23 – **VOLUME + –** Adjusting the sound level when the player is connected via the ANALOG OUT output or the DIGITAL OUT output to an amplifier or HiFi system without its own control.

24 **⏮ TRACK ⏭**
- Selecting another track during play.
- Selecting a track to start play with.
- Selecting tracks when compiling a programe.
- Selecting the tape length when making a tape recording.

25 **◀◀ SEARCH ▶▶**
- Fast search for a passage.
- Selecting the tape lenght when making a tape recording

DISPLAY



SPACE – Lights up when an extra pause is inserted between the various tracks.
PAUSE – Lights up when play is interrupted.
((O – Lights up when the player receives a command from the remote control.

TRACK – Indicates:
- what track is being played;
- the number of tracks on the CD or in a programme.

PEAK
- Flashes when the loudest passage (peak) on a CD or in a programme is being searched.
- Lights up when the loudest passage (peak) has been found.

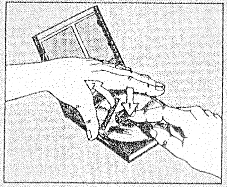
TRACK TIME – Indicates the elapsed playing time of the track being played.
REM(aining) **TRACK TIME** – Indicates the remaining playing time of the track being played.
TOTAL REM(aining) **TIME** – Indicates the remaining playing time of the CD or a programme.
TOTAL TIME – Indicates the total playing time of the CD or a programme.
REPEAT – Lights up when you repeat a CD or a programme.
REPEAT 1 – Lights up when you repeat a track.
SHUFFLE – Lights up when the tracks are played in random order.
PROGRAM – Flashes when a programme is being compiled.
1-15 track number indicator – Shows the number of tracks on the CD.
+ – Lights up when there are more than 15 tracks on the CD.

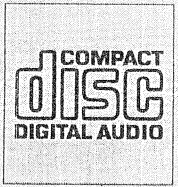
	Display messages:
READ	Lights up when the CD's contents list is being scanned.
no DISC	Lights up when there is no CD in the CD compartment.
NO AUDIO DISC	Lights up when inserting or playing a non audio CD (CD-ROM, CD-I or CDV).
WRONG TRACK	Lights up if you select a non-existent track number.
GO TO PLAY	Lights up if you try to activate a function for which you must first start play.
GO TO STOP	Lights up if you try to activate a function for which you must first stop play.

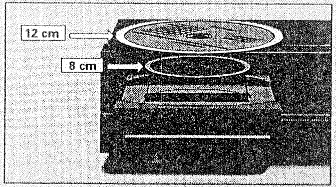
NORMAL PLAYBACK (PLAY/REPLAY)

NOTE! Use only audio CDs; no CD-ROM, CD- I or CDV.

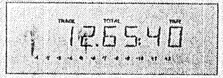
- Press POWER ON/STANDBY **1** to switch the player on.
- Open the CD compartment by pressing OPEN/CLOSE **10**.
- *OPEN* lights up.
- Insert an audio CD, ***printed side up***, and close the compartment.



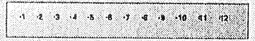


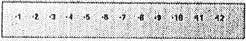


- *CLOSE* lights up, followed by *READ*. The number of tracks and the playing time of the CD are shown on the display.

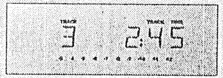


- Press PLAY/REPLAY **8** to start play.
  You can also press PLAY/REPLAY immediately after inserting the CD; the compartment then closes automatically.
  You can also close the CD compartment by pressing its front; playback will then start automatically.
- The number indicator shows how many tracks are on the CD; when a track has been played its number disappears.





- The track being played is always shown under TRACK and its elapsed playing time is shown under TRACK TIME.



- Play will stop after the last track.
- Press POWER ON/STANDBY **1** to switch the player off.

You can interrupt playback by pressing PAUSE **22** ; *PAUSE* then lights up.
Press PLAY/REPLAY **8** to restart; if you first press PAUSE again and then PLAY/REPLAY, the current track starts again from the beginning.
You can also restart play by pressing SCAN **13**, SHUFFLE **15** or the 1-0 digit keys **5**.
If you press PLAY/REPLAY *during play*, the current track starts again from the beginning.
You can stop playback by pressing STOP/CP **7** or OPEN/CLOSE **10.**

SELECTING ANOTHER TRACK DURING PLAY (1-0)

- Key in the desired number (numbers consisting of two figures must be keyed in within 2 seconds).
- The music stops and a moment later the selected track begins to play.

You can also select the number by pressing ▶▶| or |◀◀ **9** *(less than 0.5 seconds).*

SEARCHING FOR A PASSAGE DURING PLAY (|◀◀ ▶▶|)

- Hold |◀◀ **9** down to search backwards to the beginning.
- Hold ▶▶| **9** down to search forwards to the end.

The searching speed is determined by how long a key is pressed:
- the first 2 seconds fairly slowly, with sound;
- then at the maximum speed, with no sound.

If you reach the end of the last track and release ▶▶|, play will resume a few seconds before the end of the CD.

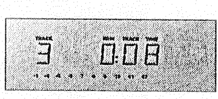
STARTING WITH A PARTICULAR TRACK (1-0)

- Key in the desired number (numbers consisting of two figures must be keyed in within 2 seconds).
- Play starts from the selected track.

You can also select the number by pressing ▶▶| or |◀◀ **9** *(less than 0.5 seconds)* and then pressing PLAY/REPLAY **8**.

SCANNING A CD (SCAN)

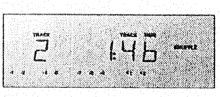
- Press SCAN **13** before or during play.
- If the CD compartment was open, it will now close.
- *SCAN* lights up for 2 seconds and the first 10 seconds of each track are played in turn; 10 seconds are counted down each time under REM TRACK TIME.



- When the player reaches a track which you wish to hear in full, press SCAN again or PLAY/REPLAY **8**.

PLAYING THE CD IN RANDOM ORDER (SHUFFLE)

- Press SHUFFLE **15** before or during play.
- If the CD compartment was open, it will now close.
- *SHUFFLE* lights up and all the tracks are now played in a random order.



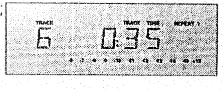
- Press SHUFFLE again if you wish to return to normal play.

If you press |◀◀ **9**, you will return to a track which has already been played.
If you press ▶▶| **9**, you will select any one of the following tracks.
If you press REPEAT **14**, twice the tracks will be repeated in a different order each time, although the first track played will always be the same.

REPEATING PLAY (REPEAT)

Repeating a track:

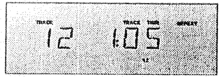
- Press REPEAT **14** before or during playback.
- *REPEAT 1* lights up; the track will now be repeated continuously.



- Press REPEAT *twice* to stop the track being repeated.

Repeating the CD:

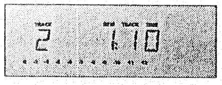
- Press REPEAT **14** twice before or during playback.
- *REPEAT* lights up; the CD will now be repeated continuously.



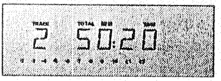
- Press REPEAT again to stop the CD being repeated.

CALLING UP OTHER TIME INFORMATION (TIME)

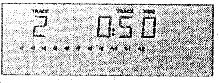
- Press TIME **16** whenever you want to know theremaining playing time of the track being played (REM TRACK TIME).



- Press TIME again if you wish to know the remaining playing time of the entire CD (TOTAL REM TIME).



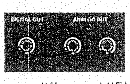
- Press TIME again if you wish to return to the elapsed playing time indication of the current track (TRACK TIME).



PLAYBACK

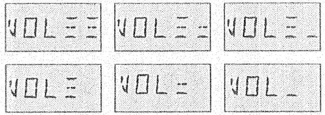
ADJUSTING THE SOUND LEVEL (– VOLUME +)

NOTE!

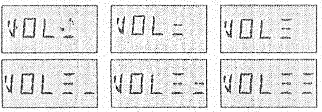


- Use the – VOLUME + keys *(on the remote control)* only if the player is connected via the ANALOG OUT output or the DIGITAL OUT output to an amplifier or HiFi system without its own control.
- The setting chosen with – VOLUME + will be cancelled when the player is switched off.

- Hold – VOLUME **23** pressed down.
- *VOLUME* lights up; the output signal from the player will now decrease gradually.
- The successive steps are shown on the diplay.



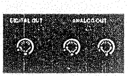
- Release the key as soon as the required sound level is obtained.
- Hold VOLUME + **23** pressed down.
- *VOLUME* lights up; the output signal will now increase again gradually to the maximum level.
- The successive steps are shown on the diplay.



- Release the key as soon as the required sound level is obtained.

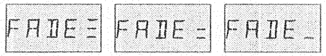
SETTING THE FADE- IN AND FADE-OUT TIME (FADER)

NOTE!

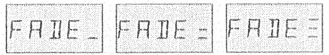


The FADER function can be used if the player is connected to the amplifier or the system via the ANALOG OUT output or the DIGITAL OUT output.

- During play press FADER **19**.
- The sound level will now gradually decrease (FADE OUT), after which the player will go into the PAUSE mode.

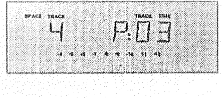


- Press FADER again.
- Play continues and the sound level will increase again to the originally set level (FADE IN).



INSERTING AN EXTRA PAUSE (AUTO SPACE)

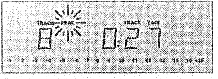
- Press AUTO SPACE **20**.
- *SPACE* lights up; during play an extra pause of 4 seconds will be inserted between the various tracks.



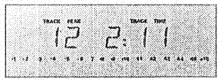
- Press AUTO SPACE again to delete the extra pause.

SEARCHING THE LOUDEST PASSAGE (PEAK SEARCH)

- In STOP mode, press PEAK SEARCH **17**.
- *PEAK* starts flashing and the CD or the programme will now be scanned for the loudest passage (the peak).



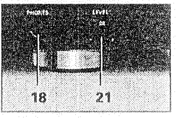
- The display shows the track being scanned and its elapsed playing time.
- When the loudest passage has been found it will be repeated continuously (from 2 seconds before the peak until 2 seconds after the peak)



- You can now adjust your recording device.
- You can stop the scan by pressing STOP/CP **7** or OPEN/CLOSE **10**; if you press PLAY/REPLAY **8**, the CD or the programme will be played from the beginning.

LISTENING WITH HEADPHONES (PHONES)

- Connect headphones with a 6.3 mm jack plug to the PHONES socket **18**.
- The sound level is adjusted with the LEVEL control **21**.

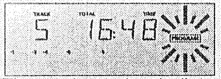


PROGRAMMING

STORING A PROGRAMME (PRG AND 1-0)

You can store 30 tracks from each CD in any required sequence in a programme. *FULL* lights up if you exceed the maximum of 30 tracks.

- In STOP mode, press PRG (programme) **4** to open the memory.
- *PROGR* lights up and starts flashing.
- Key in the required numbers; every number you key in will be directly included in the programme.
- Each time you key in (= store) a track number, the number of tracks and the playing time of your programme will be shown under TRACK and TOTAL TIME.

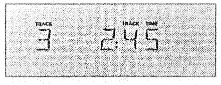


- The track number indicator always shows which numbers have been stored.
- Press PRG (programme) to quit the PROGRAMME mode.
- Press PLAY/REPLAY **8** to play the programme.

USE 0 - 9 lights up if you press |◀◀ or ▶▶| **9** while programming.

CHECKING THE PROGRAMME (REVIEW)

- Press REVIEW **11** prior to, during or after programmed play.
- *REVIEW* lights up.
- All the numbers appear in the programmed sequence under TRACK.



- Under TRACK TIME you will see the playing time of each track.

NO PROGRAM lights up if no track numbers have yet been stored.

With REVIEW you can proceed more rapidly to the next block of information.

PLAYING THE PROGRAMME (PLAY/REPLAY)

- Press PLAY/REPLAY **8**.
- Playback starts with the first number of the programme.

All keys (except EDIT **12**, PRG(programme) **4**, CLR(clear) **6** and PEAK SEARCH **17** can be used during programmed play.

Search for a particular passage is only possible within the track being played.

ERASING A PROGRAMME (STOP/CP, CLR OR OPEN/CLOSE)

In PLAY mode:

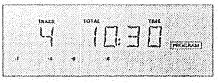
- Press OPEN/CLOSE **10** or STOP/CP **7** (twice).

In STOP mode:

- Press OPEN/CLOSE **10**, CLR(clear) **6** or STOP/CP **7**.
- The programme has now been erased.

ERASING A TRACK FROM THE PROGRAMME (CLR)

- Press REVIEW **11** before or after programmed play (STOP mode).
- *REVIEW* lights up.
- All the numbers appear in the programmed sequence under TRACK.
- Press CLR(clear) **6** as soon as the number you wish to erase appears.
- The number disappears from the number indicator; it has now been erased.
- The display shows the remaining tracks and programme time for a few seconds.



NO PROGRAM lights up if no track numbers have yet been stored.

EDIT

The EDIT function has two recording modes in which you can store the recording time of the tape in the player memory.

EDIT NORMAL – The player will determine which tracks fit on each side of the tape and will stop after the last track. The tracks will be recorded in the order in which they appear on the CD or in the programme.

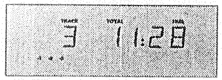
EDIT OPTIMAL – The player now calculates the combination of tracks that will optimize the use of available recording time.

NOTE!

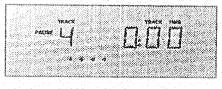
- The EDIT function cannot be used for CDs containing more than 30 tracks.
- The – VOLUME + keys (on the remote control) may not be used during recording as they affect the strength of the signal from the player.

RECORDING IN THE EDIT MODE

- If required you can first search the loudest passage on the CD or in the programme and adjust your recording device. This can also be done after selecting the recording mode and the recording time.
  For this see 'SEARCHING THE LOUDEST PASSAGE (PEAK SEARCH)' on page 10.
- In STOP mode, press EDIT **12** to activate the EDIT mode.
- The display shows NORMAL (default setting).
- If required you can insert an extra pause between the various tracks by pressing AUTO SPACE **20**.
- *SPACE* then lights up.
- With ⏮ ⏭ **9** you can now select OPT(imal), CANCEL or NORMAL again.
- The display shows *OPT(imal), CANCEL,* or *NORMAL* again.
- Press EDIT **12** to store the required recording mode (NORMAL or OPTimal).
- If you select CANCEL, the EDIT mode will be cancelled and the player will go back to STOP mode.
- As soon as you have stored the recording mode the display shows C90 (default setting).
- With ⏮ ⏭ **9** you can now select the required recording time:
  C100, C105, C120, C30, C45, C60, C75 or C90.
  Other recording times can be selected using the 1-0 digit keys **5**.
  In EDIT NORMAL mode the recording time must be at least equal to the playing time of the first track on the CD or in the programme.
  In EDIT OPT(imal) mode the recording time must be at least equal to the playing time of the shortest track on the CD or in the programme.
- *WRONG TIME* lights up if you select a 'wrong' time.
- Press EDIT **12** to store the required recording time.
- The CD player will now go back to STOP mode
- The track number indicator shows which tracks fit onto side A of the tape. The number of tracks and their playing time will be shown under TRACK and TOTAL TIME.



- You can now record the entire CD or a programme from it.
- Press PLAY/REPLAY **8**.
- The numbers for side A of the tape will be played one after the other. If AUTO SPACE has been selected, after each track an extra pause of 4 seconds (AUTOSPACE) will be inserted.
- After the last track that fits on side A of the tape, the CD player will go into PAUSE mode; *PAUSE* lights up.
- The track number indicator shows which tracks fit onto side B of the tape. Under TRACK you will see the number of the first track to be recorded.



- Turn the tape over or select the tape travel direction for side B.
- Press PLAY/REPLAY **8**.
- The remaining tracks will now be played.
- After the last track play will stop; *EDIT CANCELLED* lights up.

NOTE!

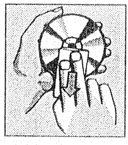
- As soon as you press PLAY/REPLAY **8** the other player functions will temporarily be switched off to prevent the recording being interfered with; *EDIT ACTIVE* lights up if you press one of the other buttons during recording.
- You can quit the EDIT mode by pressing STOP/CP **7** or OPEN/CLOSE **10**; *EDIT CANCELLED* then lights up.
- *EDIT NOT POSSIBLE* lights up if you try to record a CD containing more than 30 tracks.

ADDITIONAL INFORMATION

MAINTENANCE

The CDs

- Never write on the printed side of a CD.
- Do not attach any stickers to the CD.
- Keep the shiny surface of the of the disc clean.
  Use a soft lint-free cloth and always wipe the disc in a straight line from centre to edge.



- Never use cleaning agents for conventional records.
- Detergents or abrasive cleaning agents should not be used either.

The player

- A chamois leather slightly moistened with water is sufficient for cleaning the player.
- Do not use cleaning agents containing alcohol, spirits, ammonia or abrasives.

RECYCLING

Please observe the local regulations regarding the disposal of packaging materials, exhausted battereis and old equipment.

1. All redundant packaging material has been omitted. We have done our utmost to make the packaging easy separable into three mono-materials:
   - Cardboard (box)
   - expandable polystyrene (buffer)
   - polyethylene (bags, protective foam sheet)

2. Your set consists of materials which can be recycled if disassembled by a specialized company.

3. Do not dispose of eshausted batteries with your household waste.

TROUBLESHOOTING

English

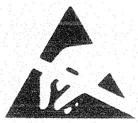
If a fault occurs, run through the points listed below before taking your player for repair.
If the fault remains, try to clear it by ***switching the player off and on again***. If this also fails to help, consult your dealer.
Under no circumstances should you repair the player yourself as this will invalidate the guarantee!

SYMPTOM	POSSIBLE CAUSE	REMEDY
– Playback of the CD does not start or interruption of playback.	– The CD has been loaded upside down. – No CD inserted. – The CD is badly scratched or dirty. – Moisture condensation on the lens.	• Reload the CD, label side up. • Insert a CD, label side up. • Clean the CD with a soft, lint-free cloth. • Leave the CD player in a warm environment until the moisture evaporates.
– Sound skips (at the same part).	– The CD is dirty.	• Clean the CD with a soft, lint-free cloth.
– The CD skips tracks.	– The CD is damaged or dirty.	• Replace or clean the CD.
– Playback does not start from the first track.	– PRG (programme) or SHUFFLE activated.	• Switch off REPEAT or clear programme.
– No sound or bad sound.	– Loose or wrong connections. – Strong magnetic fields near the CD player.	• Check connections. • Find another place for the unit or change connections.
– Volume is too low.	– Sound level has been adjusted too low with the – VOLUME + keys on the remote control.	• Adjust sound level.
– No sound or bad sound on headphones.	– Level control set to – position. – Headphones plug is dirty.	• Set level control • Clean plug.
– Remote control does not function.	– Batteries are empty.	• Replace the batteries.
– Remote control commands are not properly received.	– The distance between remote control and CD player is larger than 10 metres.	• Use remote control receiver EM 2200/2201. • Reduce the distance between remote control and CD player.

(GB) WARNING

All ICs and many other semi-conductors are susceptible to electrostatic discharges (ESD). Careless handling during repair can reduce life drastically.
When repairing, make sure that you are connected with the same potential as the mass of the set via a wrist wrap with resistance.
Keep components and tools also at this potential.

ESD



(NL) WAARSCHUWING

Alle IC's en vele andere halfgeleiders zijn gevoelig voor electrostatische ontladingen (ESD).
Onzorgvuldig behandelen tijdens reparatie kan de levensduur drastisch doen verminderen.
Zorg ervoor dat u tijdens reparatie via een polsband met weerstand verbonden bent met hetzelfde potentiaal als de massa van het apparaat.
Houd componenten en hulpmiddelen ook op ditzelfde potentiaal.

(F) ATTENTION

Tous les IC et beaucoup d'autres semi-conducteurs sont sensibles aux décharges statiques (ESD).
Leur longévité pourrait être considérablement écourtée par le fait qu'aucune précaution n'est prise à leur manipulation.
Lors de réparations, s'assurer de bien être relié au même potentiel que la masse de l'appareil et enfiler le bracelet serti d'une résistance de sécurité.
Veiller à ce que les composants ainsi que les outils que l'on utilise soient également à ce potentiel.

(D) WARNUNG

Alle ICs und viele andere Halbleiter sind empfindlich gegen elektrostatische Entladungen (ESD).
Unsorgfältige Behandlung bei der Reparatur kann die Lebensdauer drastisch vermindern.
Sorgen sie dafür, dass Sie im Reparaturfall über ein Pulsarmband mit Widerstand mit dem Massepotential des Gerätes verbunden sind.
halten Sie Bauteile und Hilfsmittel ebenfalls auf diesem Potential.

(I) AVVERTIMENTO

Tutti IC e parecchi semi-conduttori sono sensibili alle scariche statiche (ESD).
La loro longevità potrebbe essere fortemente ridatta in caso di non osservazione della più grande cauzione alla loro manipolazione.
Durante le riparazioni occorre quindi essere collegato allo stesso potenziale che quello della massa dell'apparecchio tramite un braccialetto a resistenza.
Assicurarsi che i componenti e anche gli utensili con quali si lavora siano anche a questo potenziale.

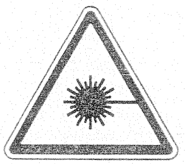
(GB)
Safety regulations require that the set be restored to its original condition and that parts which are identical with those specified be used.

(NL)
Veiligheidsbepalingen vereisen, dat het apparaat in zijn oorspronkelijke toestand wordt teruggebracht en dat onderdelen, identiek aan de gespecificeerde worden toegepast.

(D)
Bei jeder Reparatur sind die geltenden Sicherheitsvorschriften zu beachten. Der Originalzustand des Geräts darf nicht verändert werden für Reparaturen sind Original-Ersatzteile zu verwenden.

(I)
Le norme di sicurezza esigono che l'apparecchio venga rimesso nelle condizioni originali e che siano utilizzati pezzi di ricambiago identici a quelli specificati.

(F)
Les normes de sécurité exigent que l'appareil soit remis à l'état d'origine et que soient utilisées les pièces de rechange identiques à celles spécifiées.



CAUTION	INVISIBLE LASER RADIATION WHEN OPEN. AVOID EXPOSURE TO BEAM.
VARO!	AVATTAESSA OLET ALTTIINA NÄKYMÄTTÖMÄLLE LASER SÄTEILYLLE ÄLÄ KATSO SÄTEESEN.
VARNING	OSYNLIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD BETRAKTA EJ STRÅLEN.
ADVERSEL	USYNLIG LASERSTRÅLING VED ÅBNING. UNDGÅ UNSAETTELSE FOR STRÅLING.
DANGER	INVISIBLE LASER RADIATION WHEN OPEN. AVOID DIRECT EXPOSURE TO BEAM.
VORSICHT	UNSICHTBARE LASERSTRAHLUNG WENN ABDECKUNG GEÖFFNET. NICHT DEM STRAHL AUSSETZEN.

SHOCK, FIRE HAZARD SERVICE TEST:

CAUTION: After servicing this appliance and prior to returning to customer, measure the resistance between either primary AC cord connector pins(with unit NOT connected to AC mains and its Power switch ON), and the face or Front Panel of product and controls and chassis bottom.
Any resistance measurement less than 1 Megohms should cause unit to be repaired or corrected before AC power is applied, and verified before return to user/customer.
Ref. UL Standard NO.1492.

NOTE ON SAFETY:

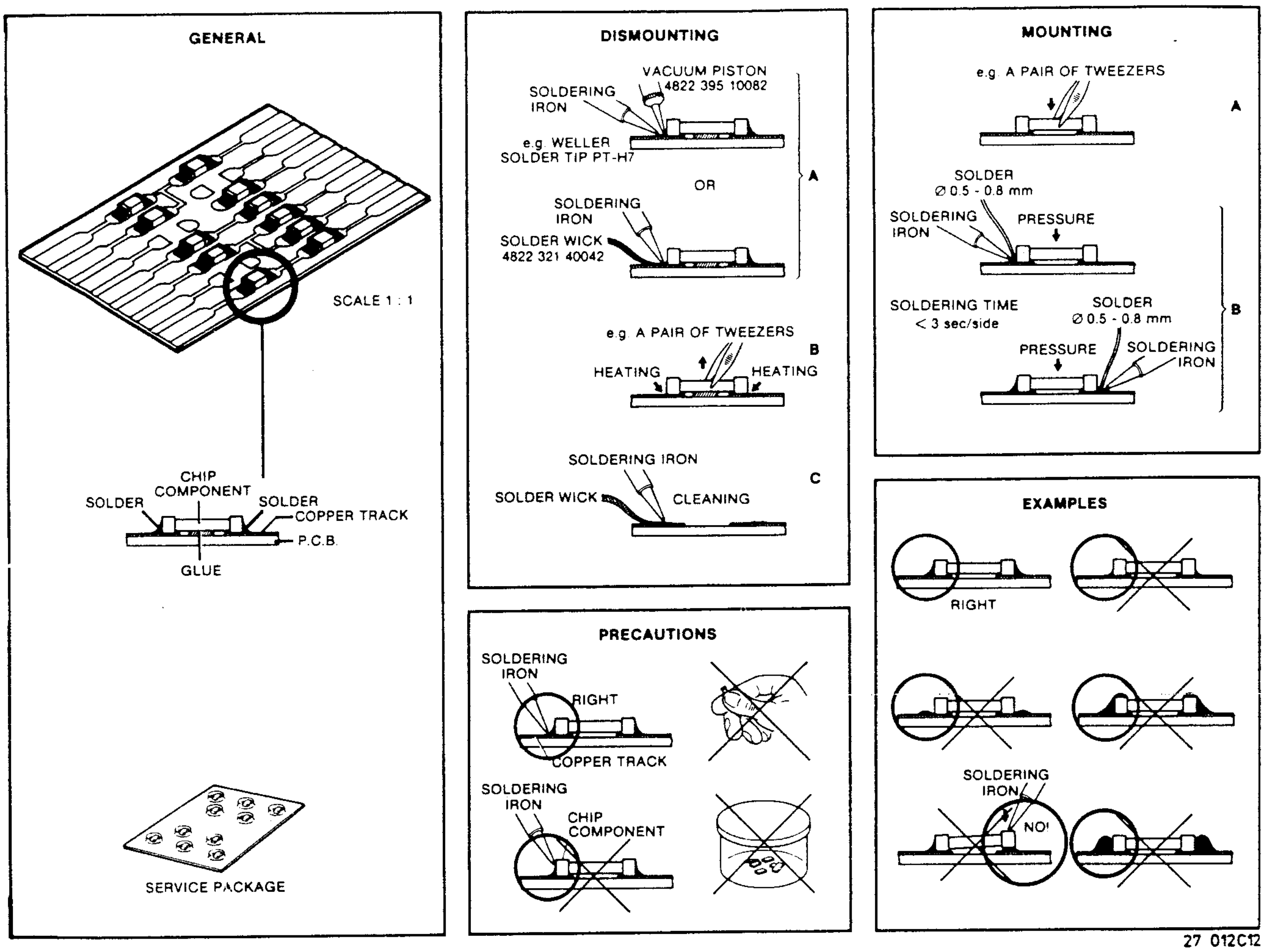
Symbol ⚠ Fire or electrical shock hazard. Only original parts should be used to replace any part marked with symbol ⚠. Any other component substitution(other than original type), may increase risk or fire or electrical shock hazard.

"Pour votre sécurité, ces documents doivent être utilisés par des spécialistes agréés, seuls habilités à réparer votre appareil en panne"

CLASS 1
LASER PRODUCT
3122 110 03420

SERVICING HINTS

In the set chip components have been applied. For disassembly and assembly of chip components see the figure below.


GENERAL
SCALE 1 : 1
CHIP COMPONENT
SOLDER
SOLDER
COPPER TRACK
P.C.B.
GLUE
SERVICE PACKAGE
DISMOUNTING
VACUUM PISTON
4822 395 10082
SOLDERING IRON
e.g. WELLER SOLDER TIP PT-H7
OR
SOLDERING IRON
SOLDER WICK
4822 321 40042
A
e.g. A PAIR OF TWEEZERS
B
HEATING
HEATING
SOLDERING IRON
C
SOLDER WICK
CLEANING
PRECAUTIONS
SOLDERING IRON
RIGHT
COPPER TRACK
SOLDERING IRON
CHIP COMPONENT
MOUNTING
e.g. A PAIR OF TWEEZERS
A
SOLDER
⌀ 0.5 - 0.8 mm
SOLDERING IRON
PRESSURE
SOLDERING TIME
< 3 sec/side
SOLDER
⌀ 0.5 - 0.8 mm
B
PRESSURE
SOLDERING IRON
EXAMPLES
RIGHT
SOLDERING IRON
NO!

27 012C12

SERVICE TOOLS

Audio signals disc	4822 397 30184
Disc without errors(SBC444) +	
disc with DO errors,black spots and fingerprints(SBC444A)	4822 397 30245
Disc(65 min 1 kHz) without no pause	4822 397 30155
Max. diameter disc(58.0 mm)	4822 397 60141
Torx screwdrivers	
Set(straight)	4822 395 50145
Set(square)	4822 395 50132
13th order filter	4822 395 30204

DISMANTLING INSTRUCTIONS

OPEN EXPLODED VIEW ON PAGE 33

COVER 151

- SCREWS 171,172,173,174, 175,176
- LIFT COVER AT REAR SIDE

FRONT 1

- REMOVE TRAY FRONT 65
- SCREWS 75,76,78
- DISCONNECT 2 GROUNDING WIRES FROM BOTTOMPLATE
- UNLOCK 2 LIPS FROM BOTTOMPLATE
- UNLOCK LIP AT RIGHT AND LEFT SIDE
- DEMOUNT FRONT

SERVICE POSITION

- REMOVE FOOT 253(SCREW 259)
- REMOVE SERVICE COVER IN BOTTOMPLATE BY CUTTING 4 LIPS
- PUT SET ON RIGHT SIDE IN SERVICE POSITION
- TO REMOUNT: TURNAROUND SERVICE COVER 180 DEGREES
- CUTT OF CORNER(WILL BE UNDER FOOT AFTER REMOUNTING)
- FIX COVER WITH 3 SELFTAPPING SCREWS FOR METAL M3X6

LOADER ASSY 81

- OPEN TRAY
- REMOVE SCREWS 83,84,85(LOADERCHASSIS - BOTTOMPLATE)
- REMOVE SCREWS 194,195(MONOBOARD - BOTTOMPLATE)
- REMOVE SCREWS 268,273(CINCH SOCKETS - BACKPLATE)
- CLOSE TRAY
- DEMOUNT LOADER

SERVO DECODER PANEL 1001

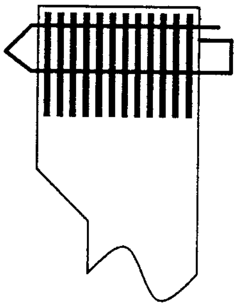
- REMOVE 3 SCREWS(MONOBOARD - LOADERCHASSIS)
- UNLOCK FLEXCONNECTOR AND REMOVE FLEX
- PUT PAPERCLIP ON FLEX END
- PUT BRASS SHEET (TOOL 4822 321 11192) IN FLEXCONNECTOR
- DEMOUNT PANEL

REPLACEMENT OF CDM12.1 MECHANISM

SEE EXPLODED VIEW OF LOADER ON PAGE 32

- REMOVE TRAY 101 (UNLOCK WITH SCREWDRIVER. SEE DETAIL I)
- DEMOUNT SUBCHASSIS 109
- DESOLDER WIRING TREE OF CDM12
- REMOVE SUSPENSIONS FROM CDM12
- REPLACE CDM12.1 MECHANISM

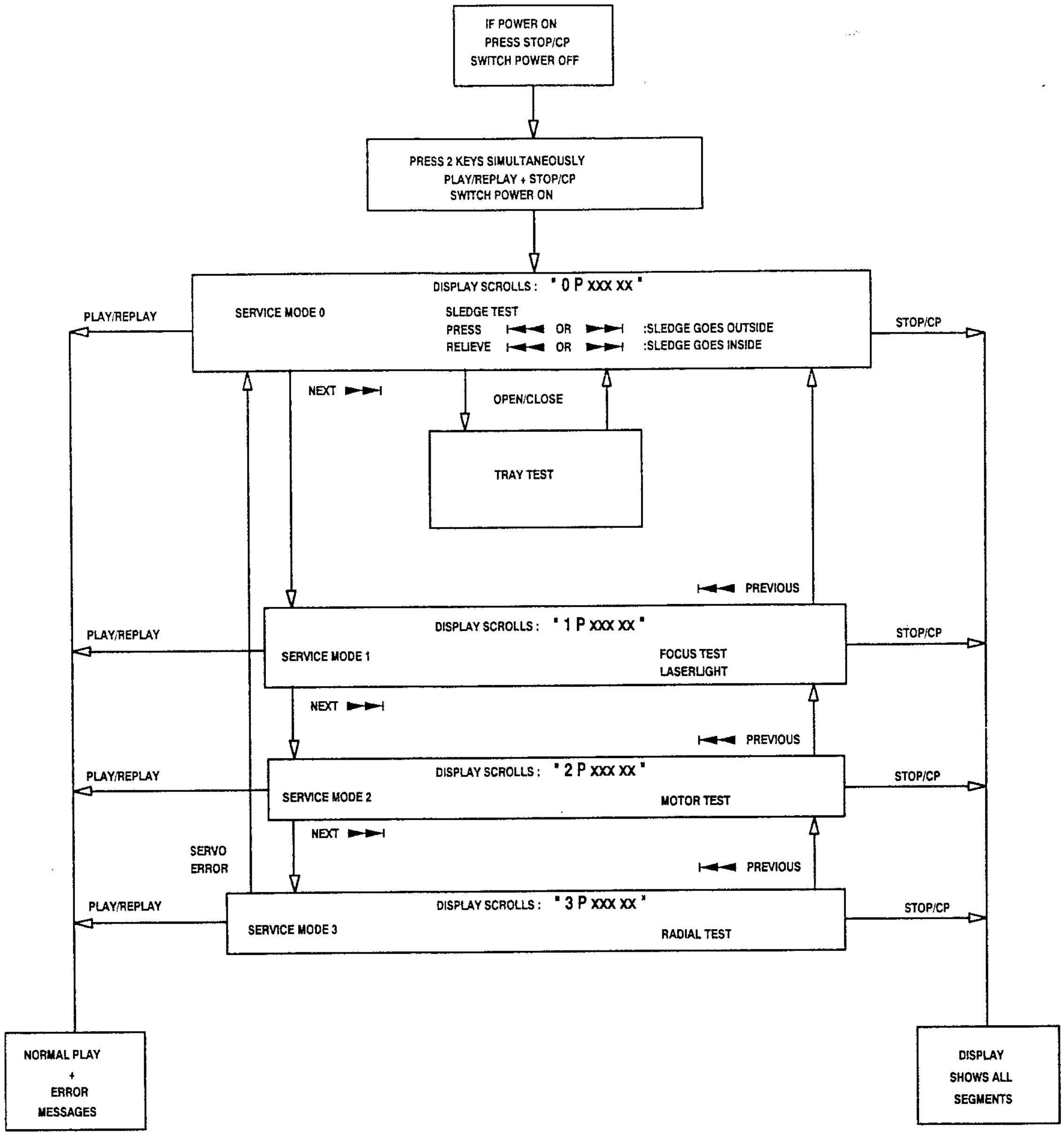
! ESD PRECAUTIONS



1. MOUNT PAPERCLIP ON FLEXFOIL AFTER DEMOUNTING FLEX
2. PUT SERVICE TOOL 4822 321 11192 (BRASS SHEET) TEMPORARY IN FLEX CONNECTOR ON PCB TO DISCHARGE ELCO'S. CHARGES MIGHT DAMAGE CDM12.1 MECHANISM DURING REMOUNTING

HAS1173
9606

SERVICE TEST PROGRAM


IF POWER ON
PRESS STOP/CP
SWITCH POWER OFF
PRESS 2 KEYS SIMULTANEOUSLY
PLAY/REPLAY + STOP/CP
SWITCH POWER ON
DISPLAY SCROLLS : " 0 P xxx xx "
SERVICE MODE 0
SLEDGE TEST
PRESS ⏮ OR ⏭ :SLEDGE GOES OUTSIDE
RELIEVE ⏮ OR ⏭ :SLEDGE GOES INSIDE
PLAY/REPLAY
STOP/CP
NEXT ⏭
OPEN/CLOSE
TRAY TEST
⏮ PREVIOUS
DISPLAY SCROLLS : " 1 P xxx xx "
SERVICE MODE 1
FOCUS TEST
LASERLIGHT
PLAY/REPLAY
STOP/CP
NEXT ⏭
⏮ PREVIOUS
DISPLAY SCROLLS : " 2 P xxx xx "
SERVICE MODE 2
MOTOR TEST
PLAY/REPLAY
STOP/CP
NEXT ⏭
SERVO
ERROR
⏮ PREVIOUS
DISPLAY SCROLLS : " 3 P xxx xx "
SERVICE MODE 3
RADIAL TEST
PLAY/REPLAY
STOP/CP
NORMAL PLAY
+
ERROR
MESSAGES
DISPLAY
SHOWS ALL
SEGMENTS

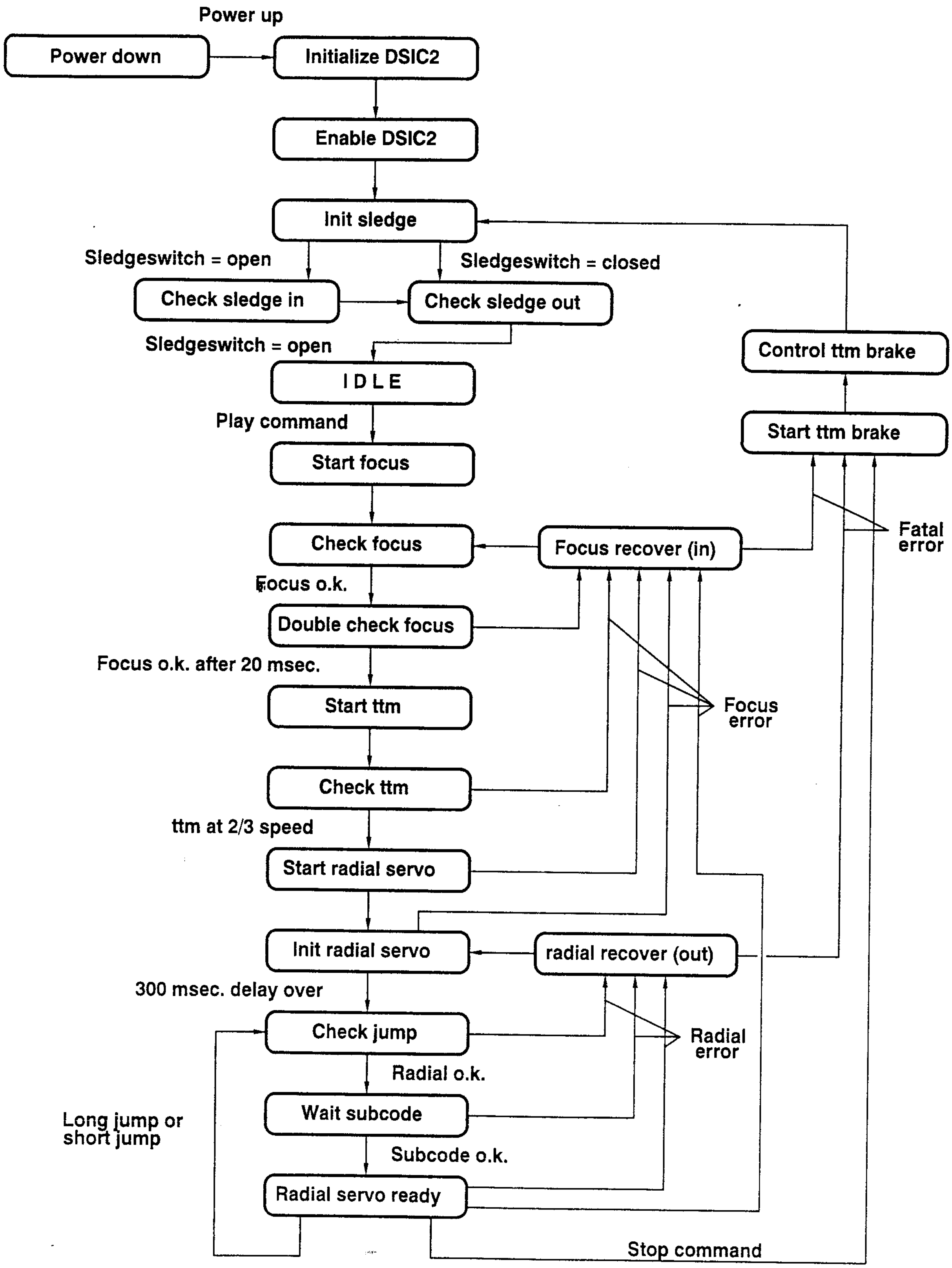
ERROR MESSAGES

-"SLEDGE ERROR"
-"FOCUS ERROR"
-"RADIAL ERROR"
-"MOTOR ERROR"

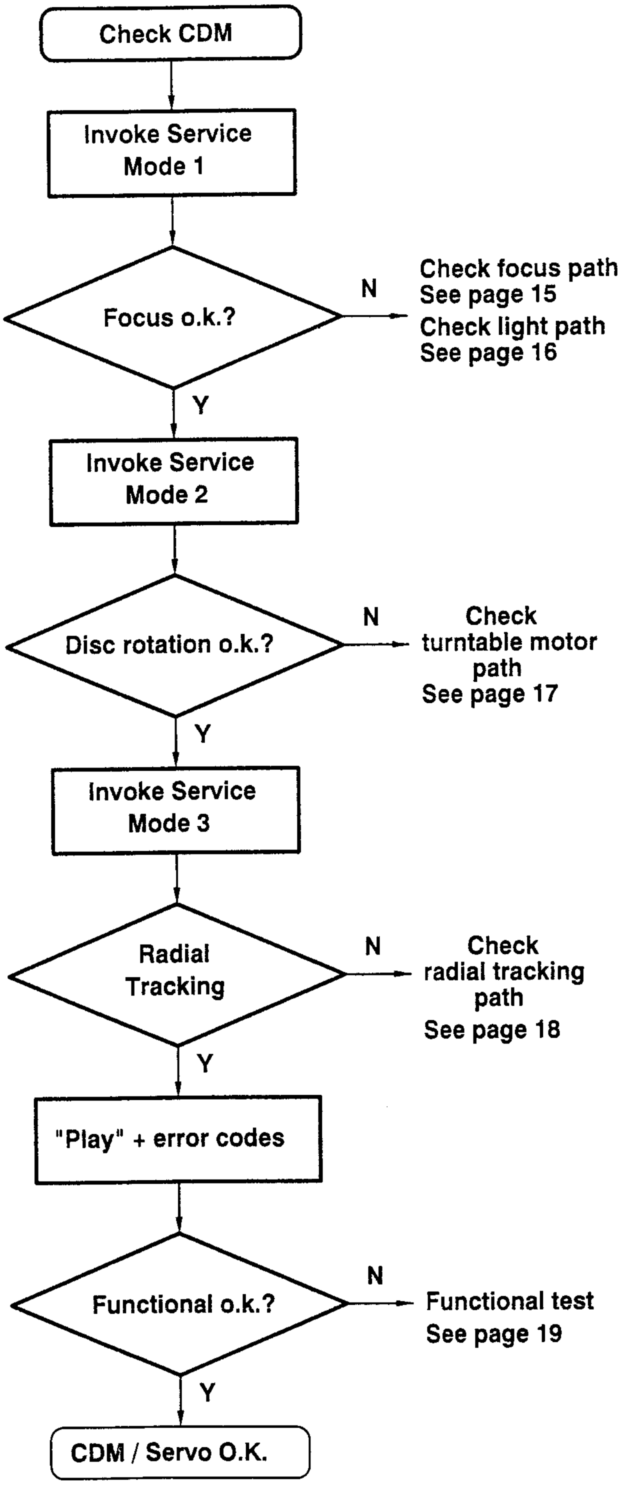
HAS1174
9606

P xxx = PROGRAM OF MICROPROCESSOR
xx = VERSION OF PROGRAM

CDM 12.1 start up diagram.


Power up
Power down
Initialize DSIC2
Enable DSIC2
Init sledge
Sledgeswitch = open
Sledgeswitch = closed
Check sledge in
Check sledge out
Sledgeswitch = open
Control ttm brake
IDLE
Play command
Start ttm brake
Start focus
Check focus
Focus recover (in)
Fatal error
Focus o.k.
Double check focus
Focus o.k. after 20 msec.
Start ttm
Focus error
Check ttm
ttm at 2/3 speed
Start radial servo
Init radial servo
radial recover (out)
300 msec. delay over
Check jump
Radial error
Radial o.k.
Long jump or short jump
Wait subcode
Subcode o.k.
Radial servo ready
Stop command

Main Fault Finding Guide CDM 12.1
System


Check CDM
Invoke Service Mode 1
Focus o.k.?
N
Check focus path See page 15
Check light path See page 16
Y
Invoke Service Mode 2
Disc rotation o.k.?
N
Check turntable motor path See page 17
Y
Invoke Service Mode 3
Radial Tracking
N
Check radial tracking path See page 18
Y
"Play" + error codes
Functional o.k.?
N
Functional test See page 19
Y
CDM / Servo O.K.

Listen to kind of "scratching sound" while slowly turning the disc by hand.

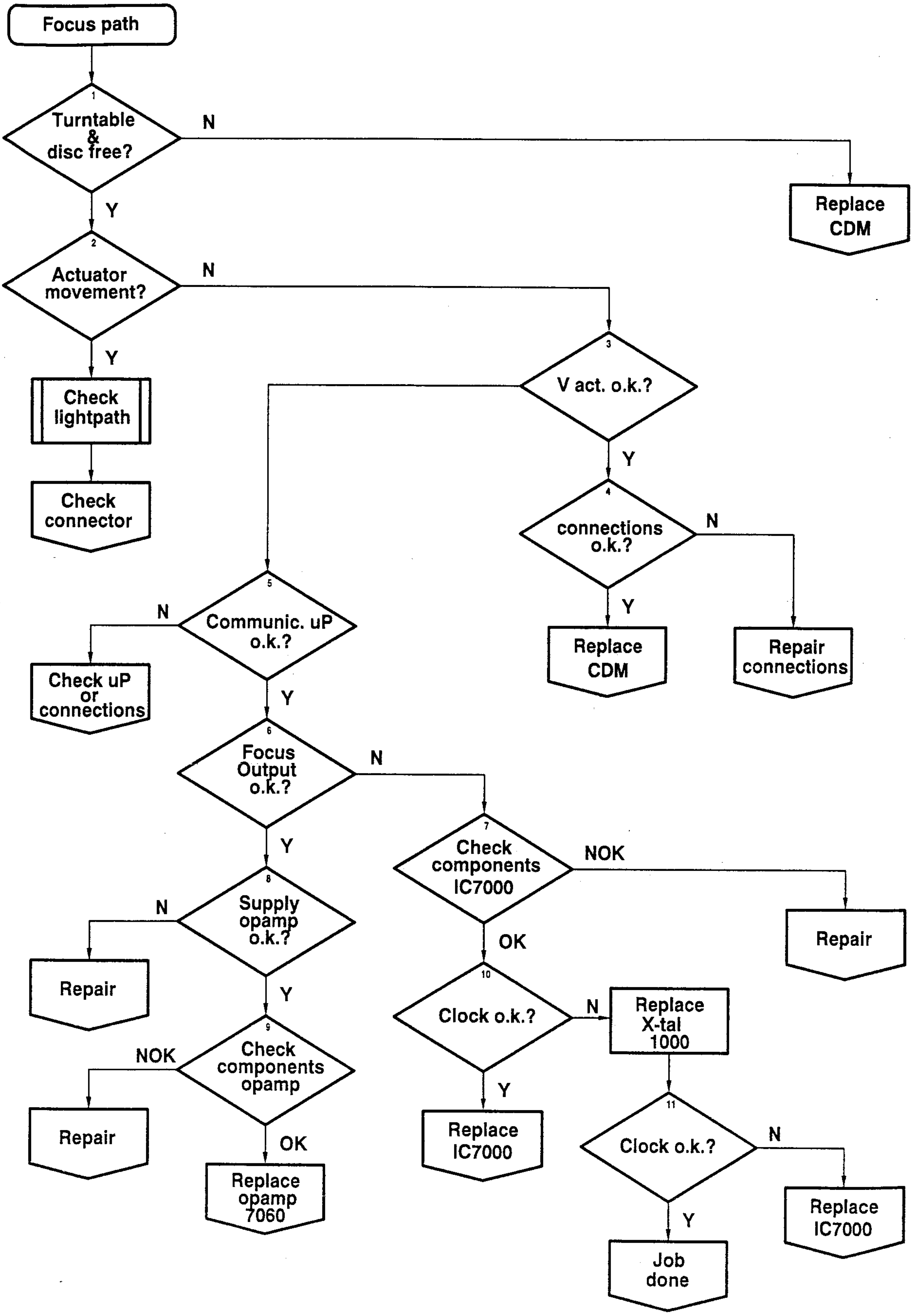
Disc is turning clock wise at normal speed.

Activity on RAD+
(pin 4 connector 1052)

*After "play" starts at track 1 at time 0:00.
*Go to outer track and start again at time 0:00 after max. 6 seconds.

*Try search function.

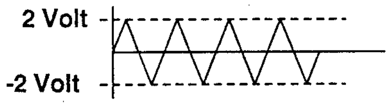
*When going from "Pauze" to "play" music has to restart at the same place.


Focus path
1
Turntable & disc free?
N
Replace CDM
Y
2
Actuator movement?
N
Y
Check lightpath
Check connector
3
V act. o.k.?
Y
4
connections o.k.?
N
Y
Replace CDM
Repair connections
5
Communic. uP o.k.?
N
Check uP or connections
Y
6
Focus Output o.k.?
N
Y
7
Check components IC7000
NOK
Repair
OK
8
Supply opamp o.k.?
N
Repair
Y
9
Check components opamp
NOK
Repair
OK
Replace opamp 7060
10
Clock o.k.?
N
Replace X-tal 1000
Y
Replace IC7000
11
Clock o.k.?
N
Replace IC7000
Y
Job done

1)-Turntable and disc free?
Audible and visible control.

2)-Actuator movement?
Visual control.

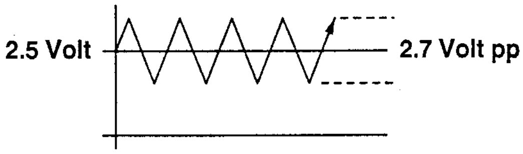
3)-Signals on actuator o.k.?
Triangle wave without disc.
See fig 1.



4)-Connections to actuator o.k.?
Check flex connector pin 2 and 3.

5)-Communication uP <-> IC7000.
SIDA activity (pin 27 of IC7000).

6)-Focus output o.k.?
See fig 2.
Measure with an 10k/3n3 low-pass filter.



7)-Components o.k.?
Check components R3010,R3011
C2012,C2013
X-tal 1000

8)-Power supply for opamp o.k.?
Check components R3006,R3007
C2008,C2009,C2071,C2074

9)-Check components o.k.?
Check components R3074,R3075,R3076,R3077
R3078,R3079
C2075,C2076

10) & 11)-Pin 17 of IC7000: a frequency of 8.46MHz?

WARNING ! ! ! LASER DAMAGE ! ! !

For measurements on the laser (flexconnector pin 1052-6), certain conditions are absolutely necessary for precaution of laser damage.

The instruction and sequence for measuring laser current is as follows:

-turn off mains power.
-wait for > 1 second
-connect a multimeter (high input impedance, not grounded accross resistor 3022. (*)
-turn on mains power and go to play mode.
-reading of measurement value (current = reading/4R7) (**)
-go to stop and turn off mains power.
-disconnect the multimeter.

* In case of a laser voltage measurement, connect the multimeter accross elcap 2025, using the same procedure as mentioned above.

* * If current is > 95 mA, you can be sure that the laser is defect;
If the current is increasing during reading (within +/- 10 seconds), you can be sure that the laser is severely damaged.

* 1)-Laser supply o.k.?
Voltage accross C2025: 4...5V

* * 2)-Laser current o.k.?
Voltage accross R3022: 150...450mV

3)-Lens clean?
Visual control. Check for dust,grease.
Take attention for the blue coating.

4)-Check inputs.
Switch back to service mode 0.
Connect a 2.4 MOhm resistor from
1052 - 9 to 5V: Voltage on pin 5 of IC7000 < 50mV.
1052 - 10 to 5V: Voltage on pin 6 of IC7000 < 50mV.
1052 - 12 to 5V: Voltage on pin 7 of IC7000 < 50mV.
1052 - 11 to 5V: Voltage on pin 10 of IC7000 < 50mV.
1052 - 8 to 5V: Voltage on pin 11 of IC7000 < 50mV.

5)-Diodes o.k.?
Use IR LED of remote control.
A half sine wave must be measured on the diodes (on pin 8,9,10,11,12 of conn. 1052) in the 10mV range.

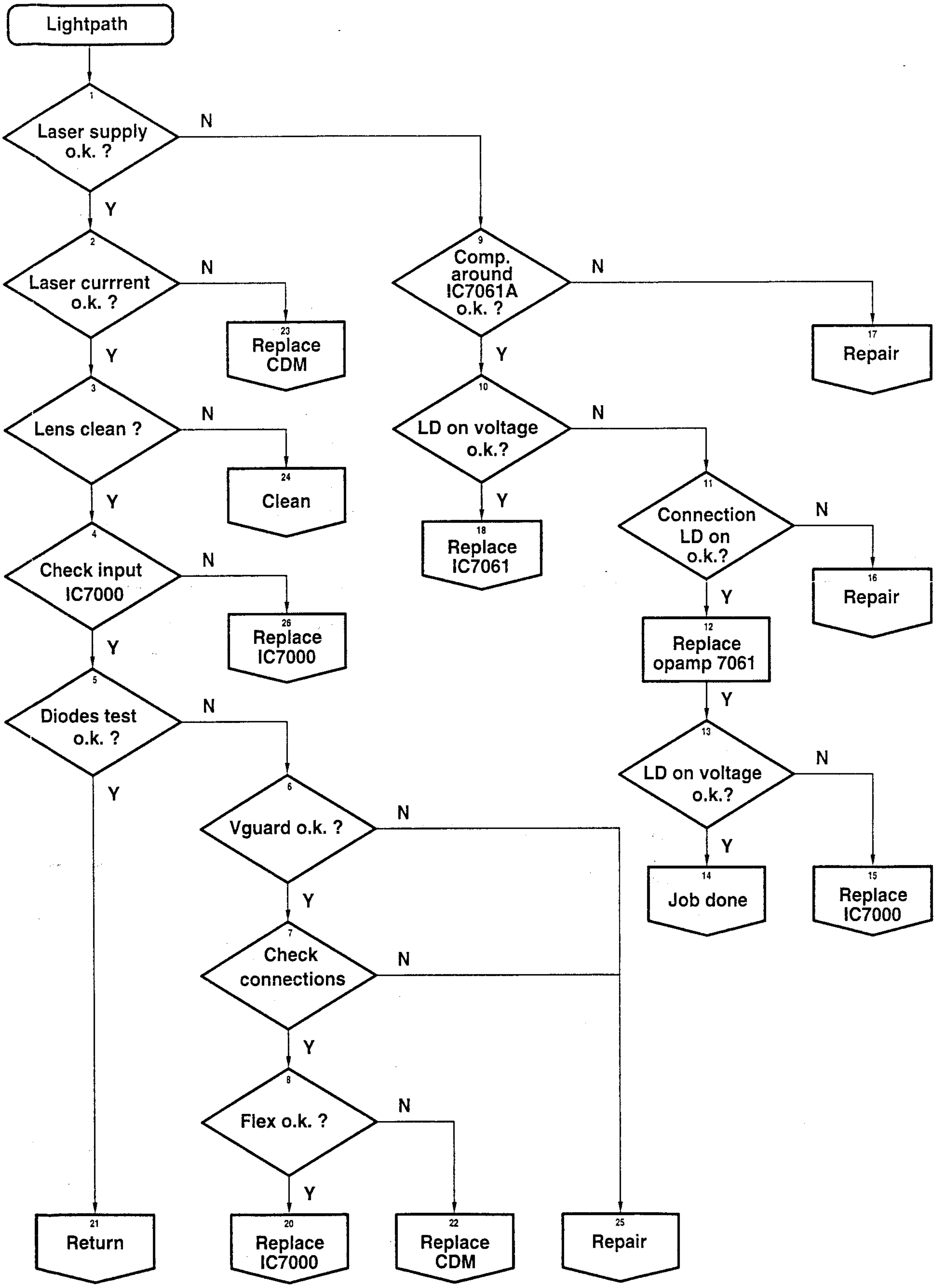
* 6)-V guard o.k.?
Voltage accross C2025: 4...5V

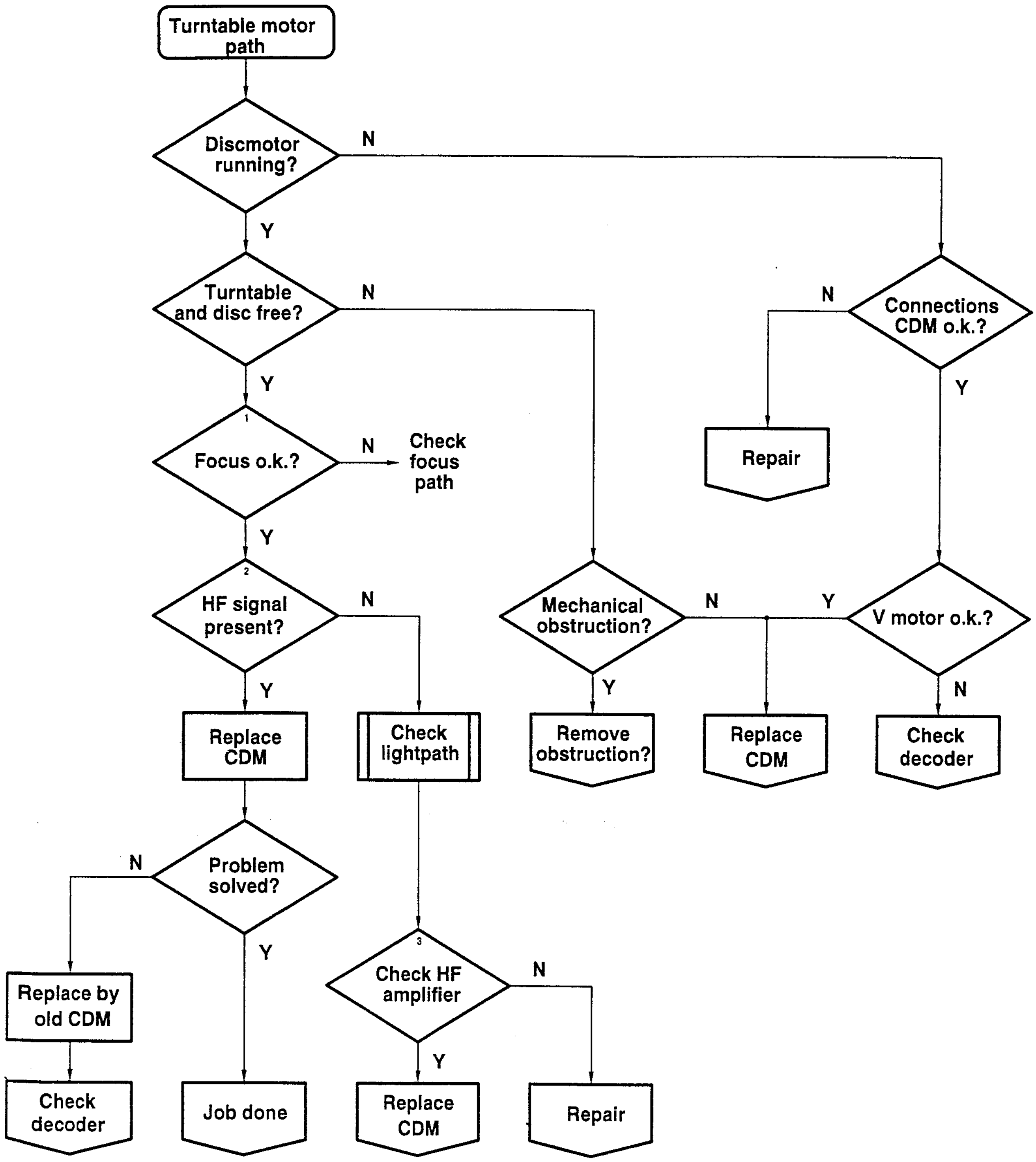
7)-Check connections between main PCB and CDM

8)-Flex o.k.?
Measure diode functions on CDM-flex

9)-Check components around IC7061
R3022,R3021,R3020
C2025,C2060,C2064

10)-LD ON voltage o.k.?
Measure on pin 2 of IC7000:4...5V.


Lightpath
1
Laser supply o.k. ?
N
Y
2
Laser currrent o.k. ?
N
23
Replace CDM
Y
3
Lens clean ?
N
24
Clean
Y
4
Check input IC7000
N
26
Replace IC7000
Y
5
Diodes test o.k. ?
N
Y
6
Vguard o.k. ?
N
Y
7
Check connections
N
Y
8
Flex o.k. ?
N
Y
21
Return
20
Replace IC7000
22
Replace CDM
25
Repair
9
Comp. around IC7061A o.k. ?
N
17
Repair
Y
10
LD on voltage o.k.?
N
Y
18
Replace IC7061
11
Connection LD on o.k.?
N
16
Repair
Y
12
Replace opamp 7061
Y
13
LD on voltage o.k.?
N
Y
14
Job done
15
Replace IC7000


Turntable motor path
Discmotor running?
N
Y
Turntable and disc free?
N
Y
1
Focus o.k.?
N
Check focus path
Y
2
HF signal present?
N
Y
Replace CDM
Check lightpath
Problem solved?
N
Y
Replace by old CDM
Check decoder
Job done
3
Check HF amplifier
N
Y
Replace CDM
Repair
Connections CDM o.k.?
N
Y
Repair
Mechanical obstruction?
N
Y
Remove obstruction?
Replace CDM
V motor o.k.?
Y
N
Check decoder

1)-Still in focus (focus o.k.?).
Voltage at pin 9 of connector 1052 > 15mV.

2)-HF-signal present.
VHFI (R3048) > 900mV pp. (testpoint 65).

3)-Check HF-amplifier.

- Sypply 5V?
- Testpoint 17=1.4...1.9V DC?
- VHFI DC =2.9...3.6V?

4)-V motor o.k.?

V motor < 2V: replace CDM.
V motor > 2V: check decoder part.

1)-Radial tracking o.k.?
No OTD (testpoint 67) activity.

2)-Check driver 7060A.
Supply: C2071,C2074.
Components: C2067,C2068,C2069,R3068,R3069,R3070,R3071,R3072,R3073.

3)-Check connections radial actuator.
Switch power off.
Measure impedance of 18 Ohm(+/-20%) between pin 1 and pin 4 of connector 1052.

4)-Check impedance on flex.
Power off.
Disconnect CDM-flex.
Measure impedance of 18 Ohm(+/-20%) between pin 1 and pin 4 of connector 1052.

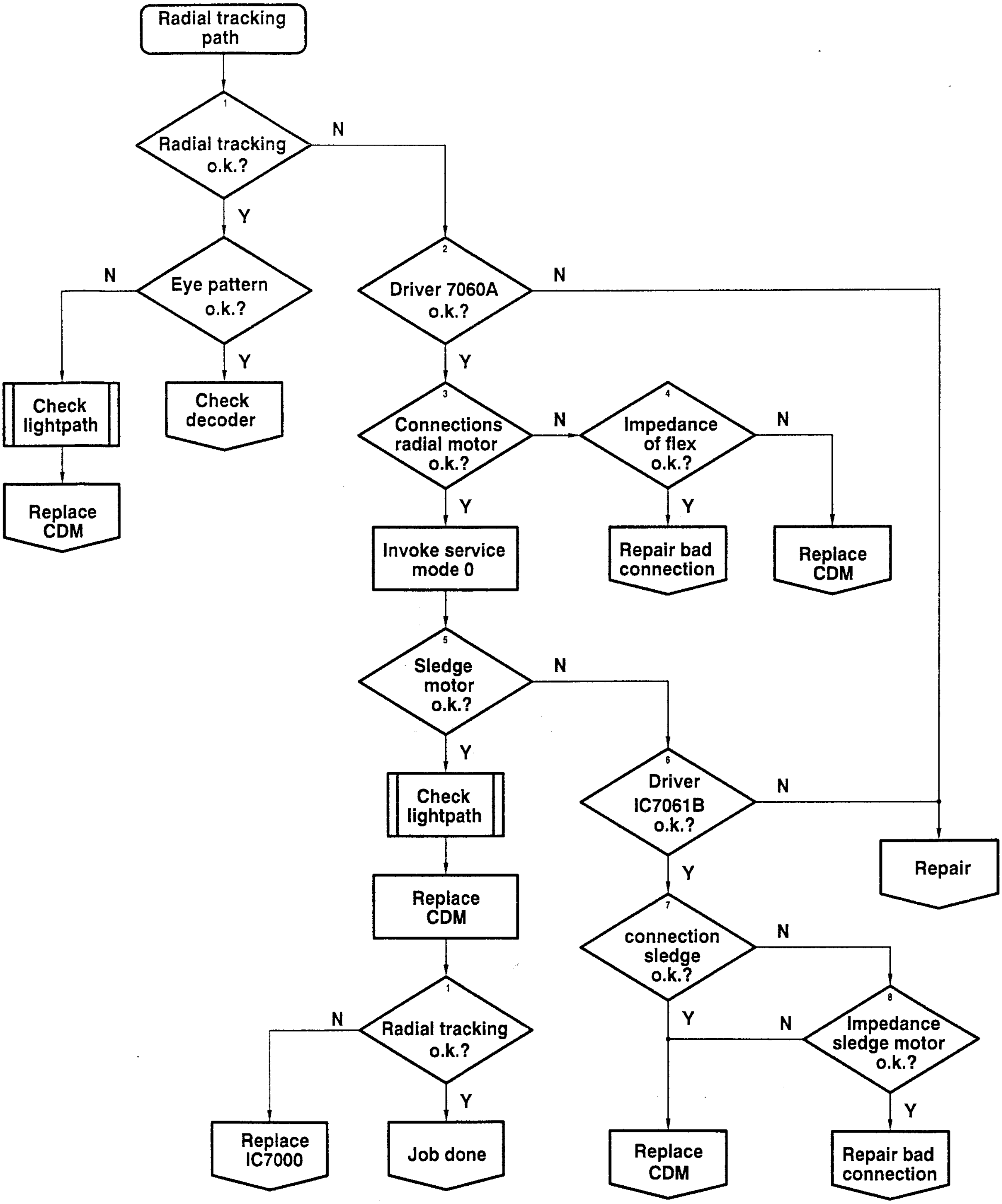
Che
light
Repl
CD

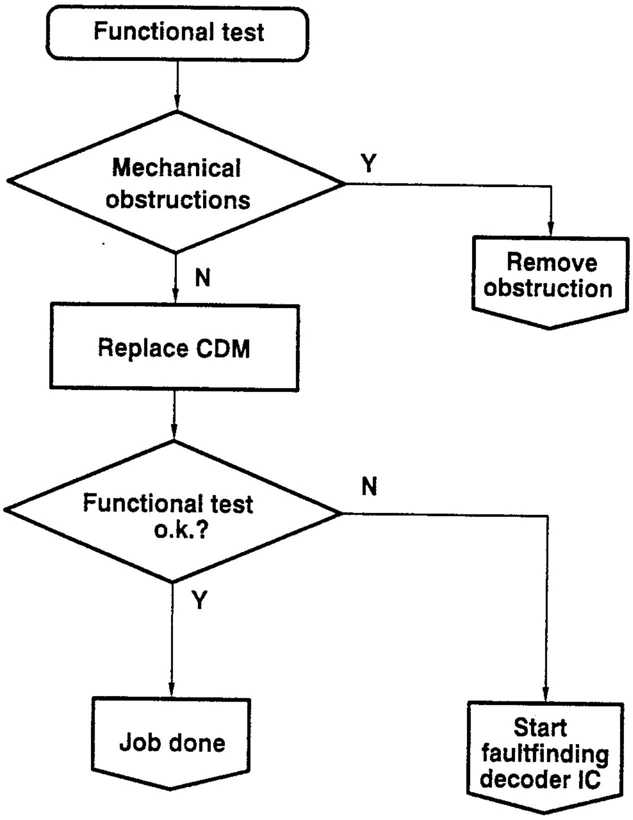
5)-Test sledge.
Power on.
Invoke service mode 0.
Move sledge out (whith search forward key).
Sledge moves to init position after releasing key.
Not o.k. if sledge doesn't move,doesn't reach the outer position or makes a ratling noise at the inner side.

6)-Check driver 7061B.
Supply: C2060,C2064.
Components: C2062,C2063,C2066,R3060,R3062,R3064,R3065,R3066,R3067.

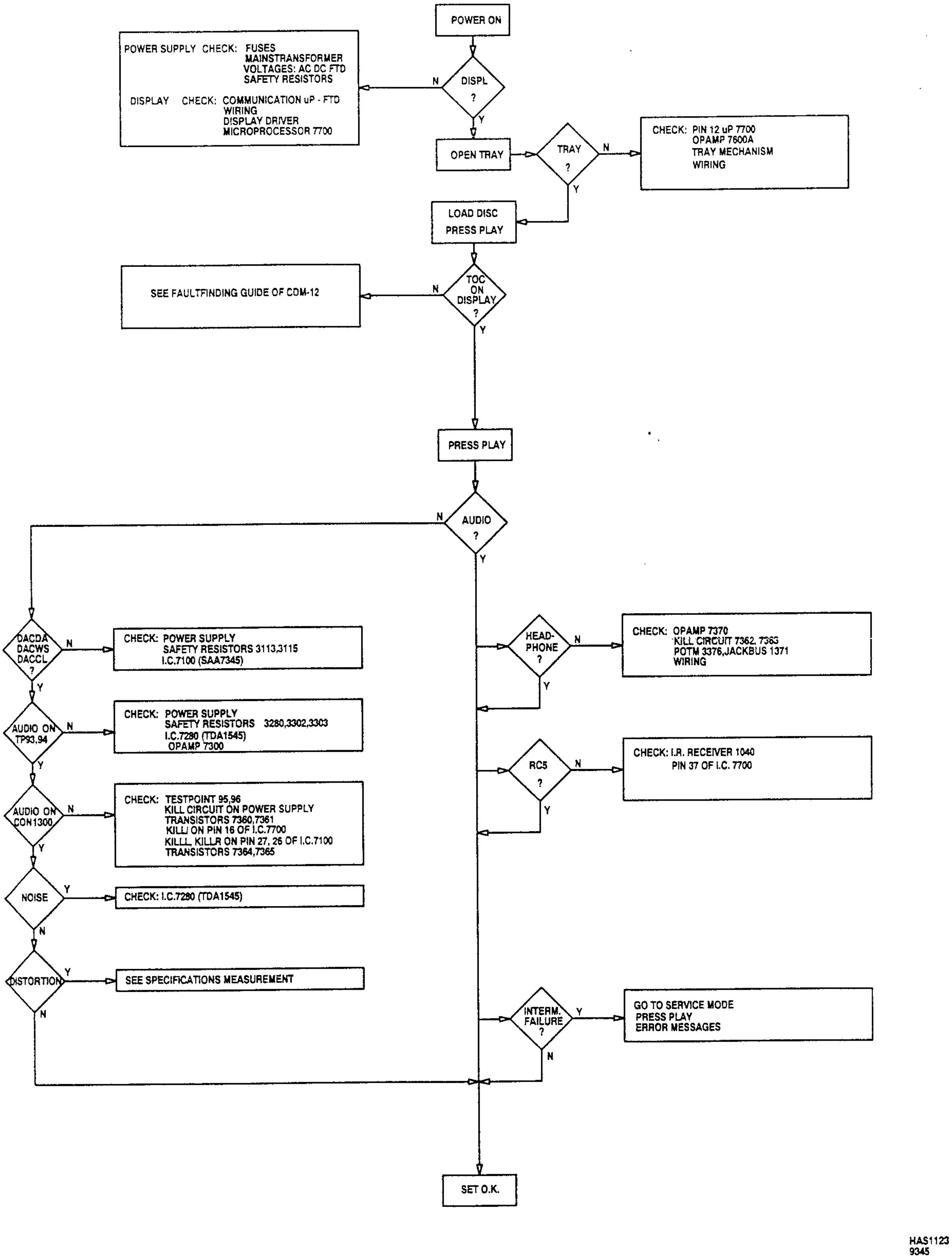
7)-Check connections of sledge drive.
Power off.
Measure impedance of 11 Ohm(+/-20%) between pin 5 and pin 6 of connector 1070.

8)-Check sledge motor.
Remove CDM.
Measure impedance of 11 Ohm(+/-20%) between motor terminals.


Radial tracking path
1
Radial tracking o.k.?
N
Y
Eye pattern o.k.?
N
Y
Check lightpath
Replace CDM
Check decoder
2
Driver 7060A o.k.?
N
Y
3
Connections radial motor o.k.?
N
Y
4
Impedance of flex o.k.?
N
Y
Repair bad connection
Replace CDM
Invoke service mode 0
5
Sledge motor o.k.?
N
Y
Check lightpath
Replace CDM
1
Radial tracking o.k.?
N
Y
Replace IC7000
Job done
6
Driver IC7061B o.k.?
N
Y
Repair
7
connection sledge o.k.?
N
Y
8
Impedance sledge motor o.k.?
N
Y
Replace CDM
Repair bad connection


Functional test
Mechanical obstructions
Y
Remove obstruction
N
Replace CDM
Functional test o.k.?
N
Y
Job done
Start faultfinding decoder IC

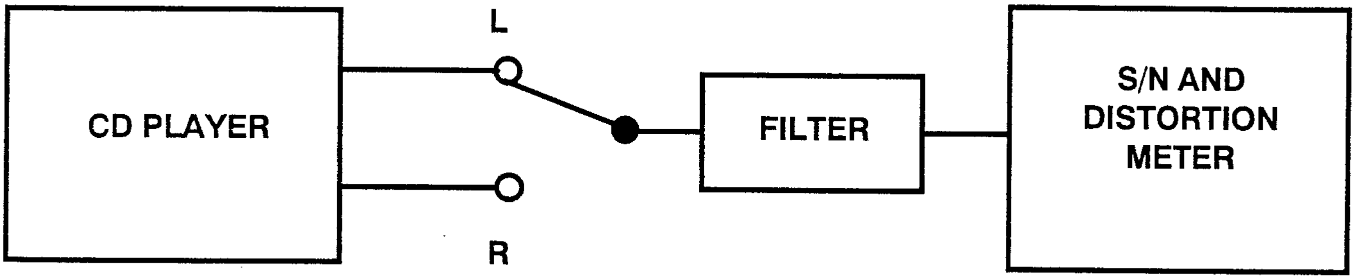
FAULTFINDING GUIDE


POWER ON
DISPL ?
N
Y
POWER SUPPLY CHECK: FUSES
MAINSTRANSFORMER
VOLTAGES: AC DC FTD
SAFETY RESISTORS
DISPLAY CHECK: COMMUNICATION uP - FTD
WIRING
DISPLAY DRIVER
MICROPROCESSOR 7700
OPEN TRAY
TRAY ?
N
Y
CHECK: PIN 12 uP 7700
OPAMP 7600A
TRAY MECHANISM
WIRING
LOAD DISC
PRESS PLAY
TOC ON DISPLAY ?
N
Y
SEE FAULTFINDING GUIDE OF CDM-12
PRESS PLAY
AUDIO ?
N
Y
DACDA DACWS DACCL ?
N
Y
CHECK: POWER SUPPLY
SAFETY RESISTORS 3113,3115
I.C.7100 (SAA7345)
AUDIO ON TP93,94
N
Y
CHECK: POWER SUPPLY
SAFETY RESISTORS 3280,3302,3303
I.C.7280 (TDA1545)
OPAMP 7300
AUDIO ON CON1300
N
Y
CHECK: TESTPOINT 95,96
KILL CIRCUIT ON POWER SUPPLY
TRANSISTORS 7360,7361
KILL/ ON PIN 16 OF I.C.7700
KILLL, KILLR ON PIN 27, 26 OF I.C.7100
TRANSISTORS 7364,7365
NOISE
Y
N
CHECK: I.C.7280 (TDA1545)
DISTORTION
Y
N
SEE SPECIFICATIONS MEASUREMENT
HEAD-PHONE ?
N
Y
CHECK: OPAMP 7370
KILL CIRCUIT 7362, 7363
POTM 3376,JACKBUS 1371
WIRING
RC5 ?
N
Y
CHECK: I.R. RECEIVER 1040
PIN 37 OF I.C. 7700
INTERM. FAILURE ?
Y
N
GO TO SERVICE MODE
PRESS PLAY
ERROR MESSAGES
SET O.K.
HAS1123
9345

SPECIFICATION MEASUREMENT

SIGNAL	AUDIO SIGNALS DISC 1	TESTPOINT	REMARKS
ANALOG OUT LEFT	TOTAL HARMONIC DISTORTION	FILTER OUTPUT	SEE TECHNICAL DATA
ANALOG OUT RIGHT	TRACKS 10 - 23		SEE DRAWING
ANALOG OUT LEFT	SIGNAL TO NOISE RATIO TRACK 1 REFERENCE LEVEL	FILTER OUTPUT	SEE TECHNICAL DATA
ANALOG OUT RIGHT	TRACK 49		SEE DRAWING

FILTER = 13TH ORDER FILTER 4822 395 30204

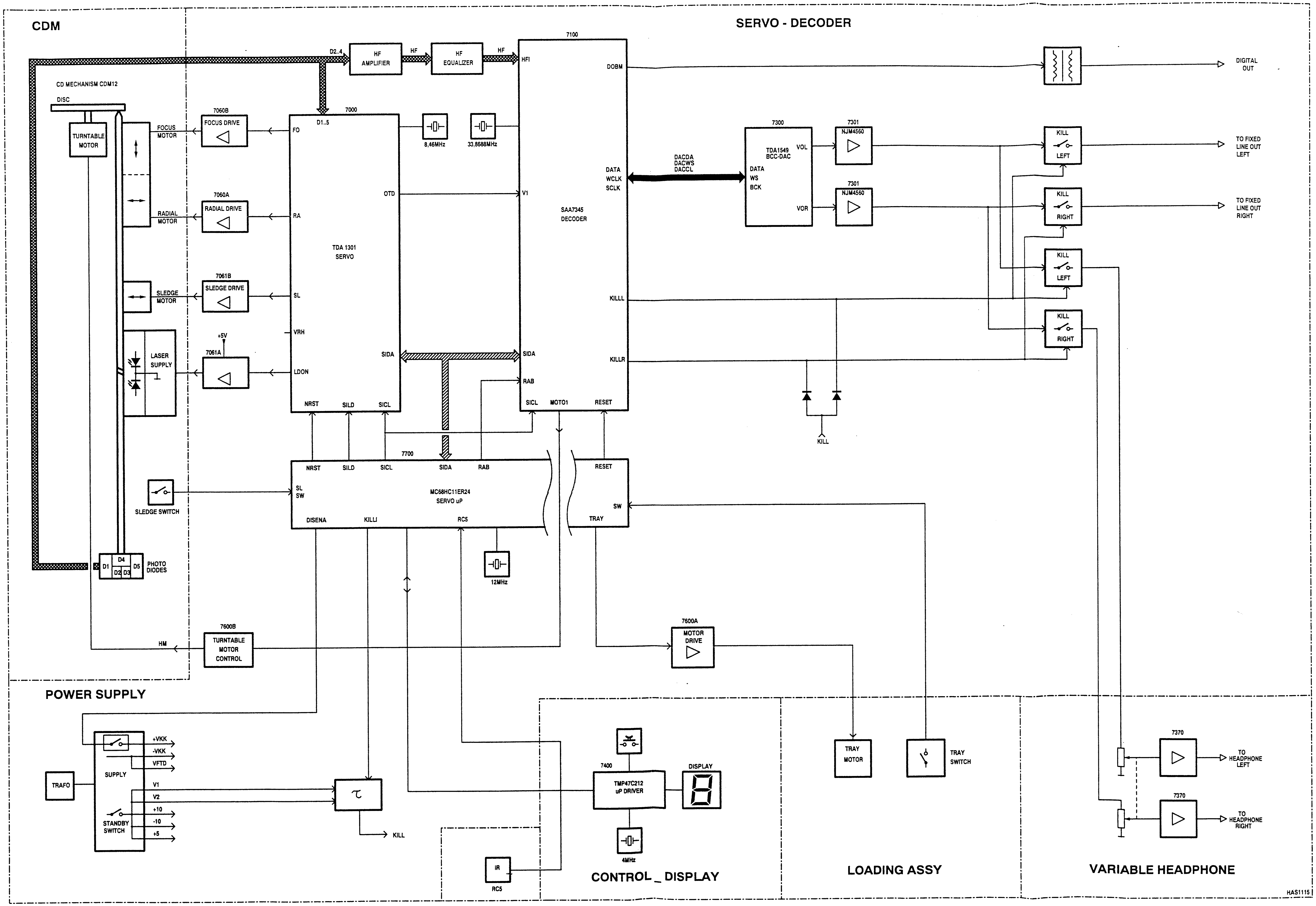


e.g.SOUND TECHNOLOGIE
ST1700B

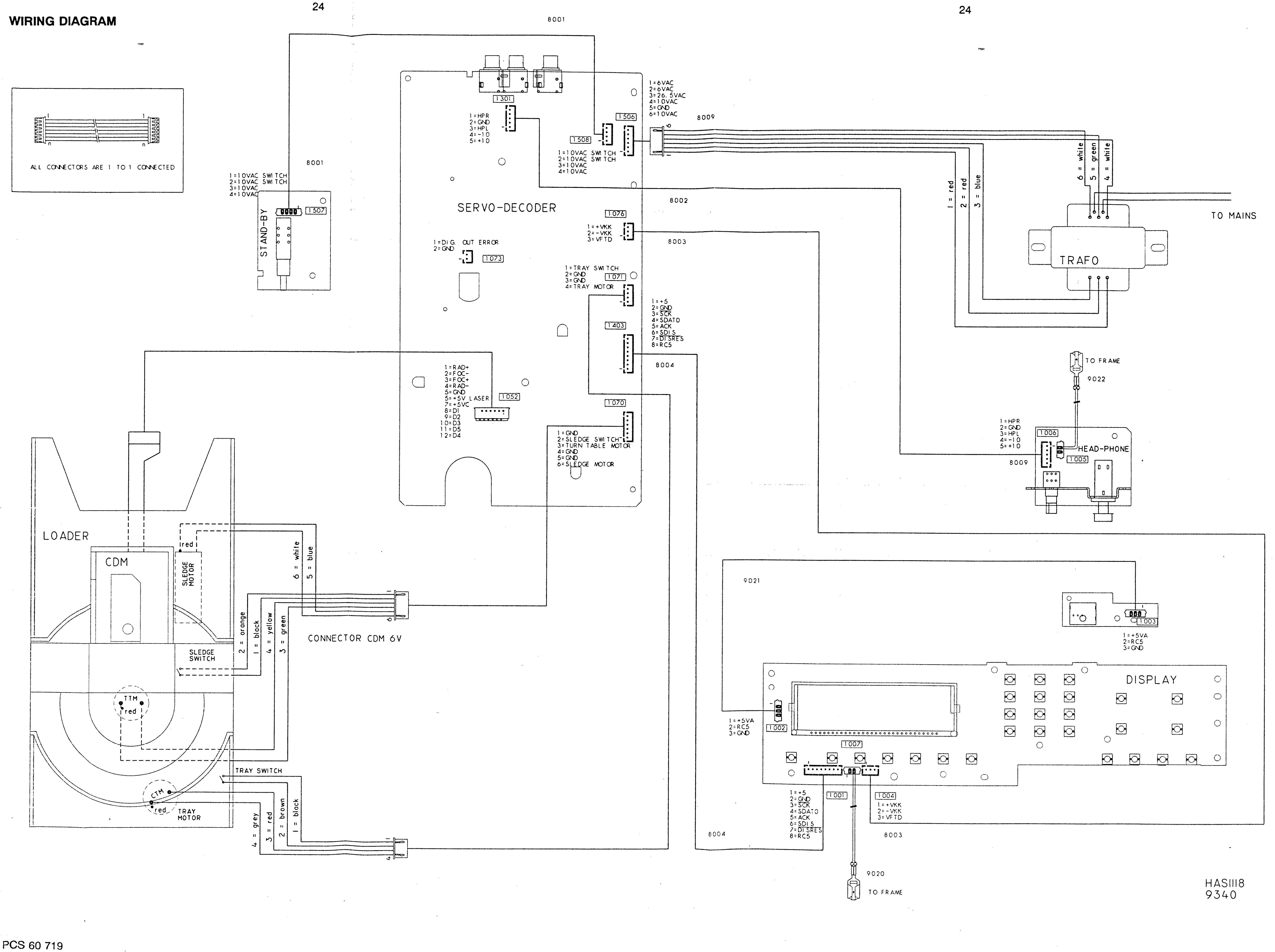
ABBREVIATIONS

BCK	Bit clock input of BCC-DAC TDA1549
CFLG	correction flag output
CL	interface clock input line
CL11	11.2896 MHz clock output
CL16	16.9344 MHz system clock output
CLA	4.2336 MHz microprocessor clock out
CLO	Clock output
CRIN	crystal/resonator input
CROUT	crystal/resonator output
D1-D4	Central diode input of TDA1301
D1-D5	Photodiode signals from CDM12 mechanism
DA	interface data I/O line
DACCL	Bit clock output of CD6 decoder SAA7345
DACDA	Data output of CD6 decoder SAA7345
DACWS	Word select output of CD6 decoder SAA7345
DATA	serial data output/Data input of BCC-DAC TDA1549
DOBM	biphase mark output
FO	Focus actuator output
FOC+	+Connection of focus actuator
FOC-	Ground connection of focus actuator
HF	High-Frequency signal to decoder input
HFIN	comparator signal input
HFREF	comparator common-mode input
IOL	Left channel current output
IOR	Right channel current output
IREF	Reference current output
ISLICE	current feedback from data slicer
LDON	Laser drive on
MISC	general purpose DAC output
MOTO1	motor output 1
MOTO2	motor output 2
NRST	Reset input
OTD	Off track detector
PORE	power-on reset enable input(active low)
R1-R2	Satellite diode signal input
RA	Radial actuator output
RAB	interface R/W and acknowledge input
RAD+	+Connection of radial actuator
RAD-	Ground connection of radial actuator
SCLK	serial bit clock output
SICL	Serial interface clock
SIDA	Serial interface data
SILD	Serial interface load
SL OUT	+Connection of sledge motor
SL	Sledge output
TEST1	test input
TEST2	test input
TS1-TS2	Test inputs
V1-5	Versatile input pins
VOL	Left channel output
VOR	Right channel output
WCLK	Word clock output
WS	Word select input of BCC-DAC TDA1549
XTLI	Oscillator input
XTLO	Oscillator output
XTLR	Oscillator reference

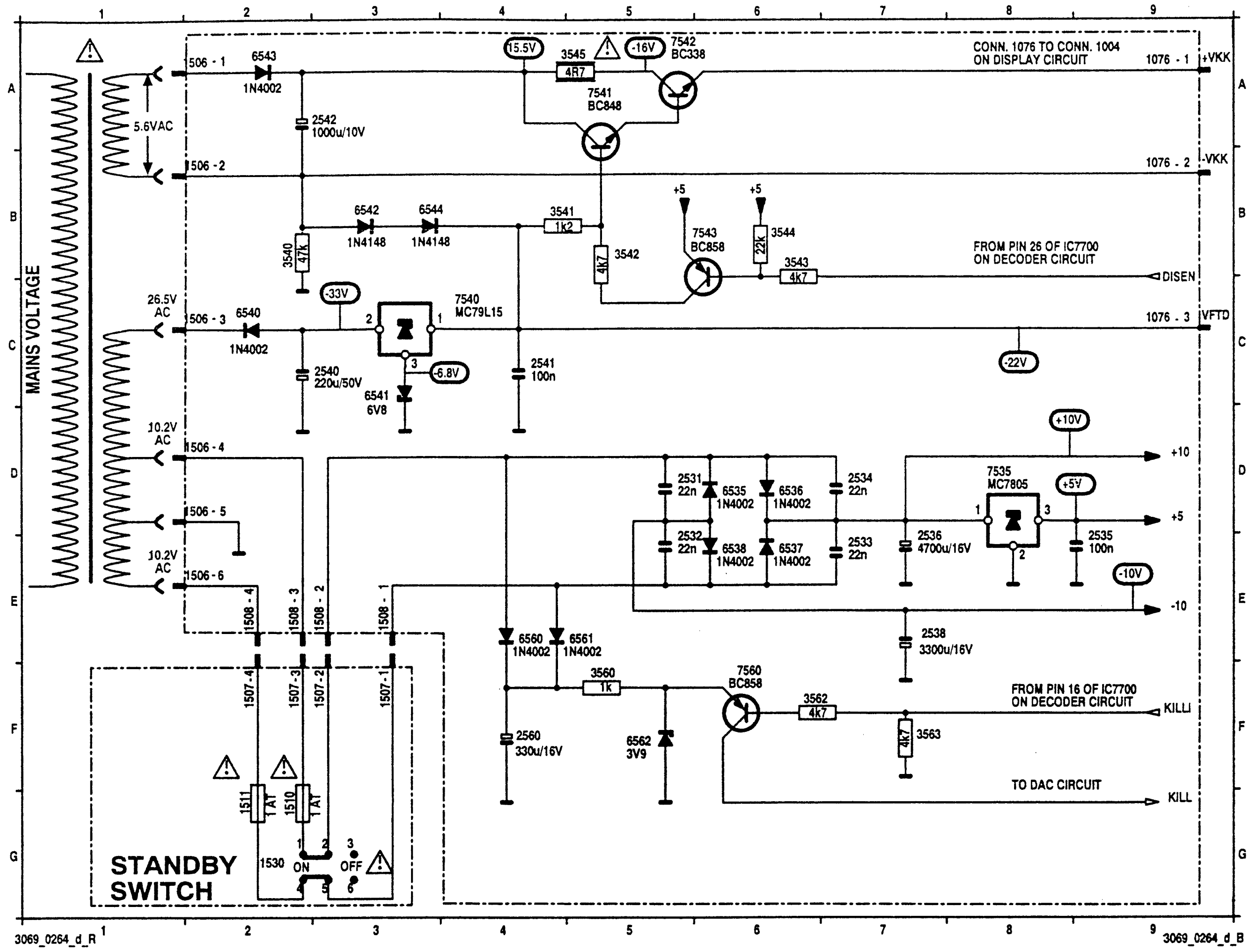
BLOCK DIAGRAM


CDM
SERVO - DECODER
CD MECHANISM CDM12
DISC
TURNTABLE MOTOR
FOCUS MOTOR
RADIAL MOTOR
SLEDGE MOTOR
LASER SUPPLY
SLEDGE SWITCH
D1 D2 D3 D4 D5
PHOTO DIODES
D2..4
HF AMPLIFIER
HF
HF EQUALIZER
HF
7060B FOCUS DRIVE
7060A RADIAL DRIVE
7061B SLEDGE DRIVE
+5V
7061A
7000
D1..5
FO
RA
SL
VRH
LDON
OTD
SIDA
TDA 1301 SERVO
NRST SILD SICL
8,46MHz
33,8688MHz
7100
HFI
V1
SIDA
RAB
SICL MOTO1 RESET
DOBM
DATA WCLK SCLK
KILLL
KILLR
SAA7345 DECODER
DACDA DACWS DACCL
7300
TDA1549 BCC-DAC
DATA WS BCK
VOL
VOR
7301 NJM4560
7301 NJM4560
DIGITAL OUT
KILL LEFT
KILL RIGHT
KILL LEFT
KILL RIGHT
TO FIXED LINE OUT LEFT
TO FIXED LINE OUT RIGHT
KILL
7700
NRST SILD SICL SIDA RAB
RESET
SL SW
MC68HC11ER24 SERVO uP
SW
DISENA KILLI RC5
TRAY
12MHz
7600B TURNTABLE MOTOR CONTROL
HM
7600A MOTOR DRIVE
POWER SUPPLY
TRAFO
SUPPLY
STANDBY SWITCH
+VKK
-VKK
VFTD
V1
V2
+10
-10
+5
τ
KILL
IR
RC5
7400
TMP47C212 uP DRIVER
DISPLAY
4MHz
CONTROL _ DISPLAY
TRAY MOTOR
TRAY SWITCH
LOADING ASSY
7370
7370
TO HEADPHONE LEFT
TO HEADPHONE RIGHT
VARIABLE HEADPHONE
HAS1115

WIRING DIAGRAM

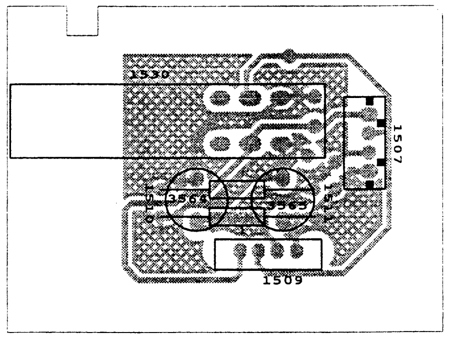

ALL CONNECTORS ARE 1 TO 1 CONNECTED
8001
SERVO-DECODER
1301
1=HPR
2=GND
3=HPL
4=-10
5=+10
1508
1506
1=10VAC SWITCH
2=10VAC SWITCH
3=10VAC
4=10VAC
1=6VAC
2=6VAC
3=26.5VAC
4=10VAC
5=GND
6=10VAC
8009
6 = white
5 = green
4 = white
1 = red
2 = red
3 = blue
TRAFO
TO MAINS
8002
STAND-BY
1507
1076
1=+VKK
2=-VKK
3=VFTD
8003
1=DIG. OUT ERROR
2=GND
1073
1=TRAY SWITCH
2=GND
3=GND
4=TRAY MOTOR
1071
1403
1=+5
2=GND
3=SCK
4=SDATO
5=ACK
6=SDIS
7=DISRES
8=RC5
8004
1=RAD+
2=FOC-
3=FOC+
4=RAD-
5=GND
6=+5V LASER
7=+5VC
8=D1
9=D2
10=D3
11=D5
12=D4
1052
1070
1=GND
2=SLEDGE SWITCH
3=TURN TABLE MOTOR
4=GND
5=GND
6=SLEDGE MOTOR
TO FRAME
9022
1=HPR
2=GND
3=HPL
4=-10
5=+10
1006
1005
HEAD-PHONE
8009
LOADER
CDM
red
SLEDGE MOTOR
6 = white
5 = blue
2 = orange
1 = black
4 = yellow
3 = green
SLEDGE SWITCH
CONNECTOR CDM 6V
TTM
red
TRAY SWITCH
CTM
red
TRAY MOTOR
4 = grey
3 = red
2 = brown
1 = black
9021
1003
1=+5VA
2=RC5
3=GND
DISPLAY
1=+5VA
2=RC5
3=GND
1002
1007
1=+5
2=GND
3=SCK
4=SDATO
5=ACK
6=SDIS
7=DISRES
8=RC5
1001
1004
1=+VKK
2=-VKK
3=VFTD
8004
8003
9020
TO FRAME
HASIII8
9340

POWER SUPPLY CIRCUIT DIAGRAM


MAINS VOLTAGE
5.6VAC
26.5V AC
10.2V AC
10.2V AC
1506 - 1
1506 - 2
1506 - 3
1506 - 4
1506 - 5
1506 - 6
6543 1N4002
2542 1000u/10V
15.5V
3545 4R7
-16V
7542 BC338
7541 BC848
CONN. 1076 TO CONN. 1004 ON DISPLAY CIRCUIT
1076 - 1 +VKK
1076 - 2 -VKK
6542 1N4148
6544 1N4148
3540 47k
3541 1k2
3542 4k7
7543 BC858
3544 22k
3543 4k7
FROM PIN 26 OF IC7700 ON DECODER CIRCUIT
DISEN
-33V
6540 1N4002
7540 MC79L15
1076 - 3 VFTD
2540 220u/50V
-6.8V
6541 6V8
2541 100n
-22V
+10V
+10
2531 22n
6535 1N4002
6536 1N4002
2534 22n
7535 MC7805
+5V
+5
2532 22n
6538 1N4002
6537 1N4002
2533 22n
2536 4700u/16V
2535 100n
-10V
-10
1508 - 4
1508 - 3
1508 - 2
1508 - 1
6560 1N4002
6561 1N4002
2538 3300u/16V
1507 - 4
1507 - 3
1507 - 2
1507 - 1
3560 1K
7560 BC858
3562 4k7
FROM PIN 16 OF IC7700 ON DECODER CIRCUIT
KILLI
2560 330u/16V
6562 3V9
3563 4k7
TO DAC CIRCUIT
KILL
1511 T1AT
1510 T1AT
1530 ON OFF
STANDBY SWITCH
3069_0264_d_R
3069_0264_d_B
1 2 3 4 5 6 7 8 9
A B C D E F G

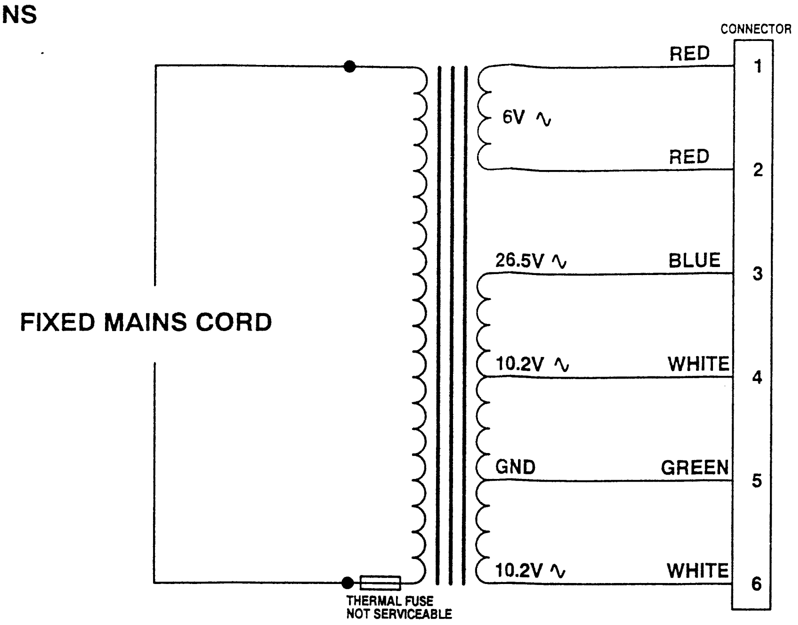
1076	A 9
1076	B 9
1076	C 9
1506	A 2
1506	B 2
1506	C 2
1506	D 2
1506	D 2
1506	E 2
1507	F 3
1507	F 3
1507	F 2
1507	F 2
1508	E 3
1508	E 3
1508	E 2
1508	E 2
1509	F 1
1509	F 1
1509	F 1
1509	F 2
1510	G 2
1511	G 2
1530	G 2
2531	D 5
2532	E 5
2533	E 7
2534	D 7
2535	E 9
2536	E 7
2538	E 7
2540	C 3
2541	C 4
2542	A 3
2560	F 4
3540	B 2
3541	B 4
3542	B 5
3543	B 6
3544	B 6
3545	A 5
3560	F 5
3562	F 6
3563	F 7
6535	D 6
6536	D 6
6537	E 6
6538	E 6
6540	C 2
6541	C 3
6542	B 3
6543	A 2
6544	B 3
6560	E 4
6561	E 5
6562	F 5
7535	D 8
7540	C 4
7541	A 5
7542	A 5
7543	B 6
7560	F 6

SWITCH PANEL


1530
1507
1509

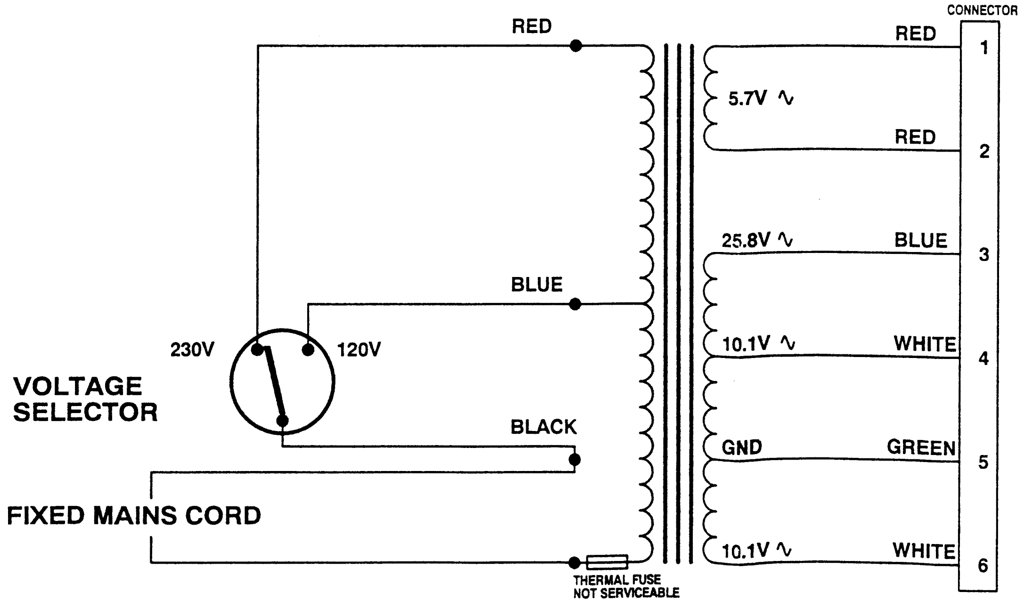
TRANSFORMER CONNECTIONS

/00/05/06/17 VERSIONS


CONNECTOR
FIXED MAINS CORD
THERMAL FUSE NOT SERVICEABLE
6V ∿
26.5V ∿
10.2V ∿
GND
10.2V ∿
RED
RED
BLUE
WHITE
GREEN
WHITE
1
2
3
4
5
6

VERSION	MAINS VOLTAGE	SERVICE CODE
/00	220V-230V	4822 146 31337
/05	240V	4822 146 31339
/06	100V	4822 146 31345
/17	117V	4822 146 31341

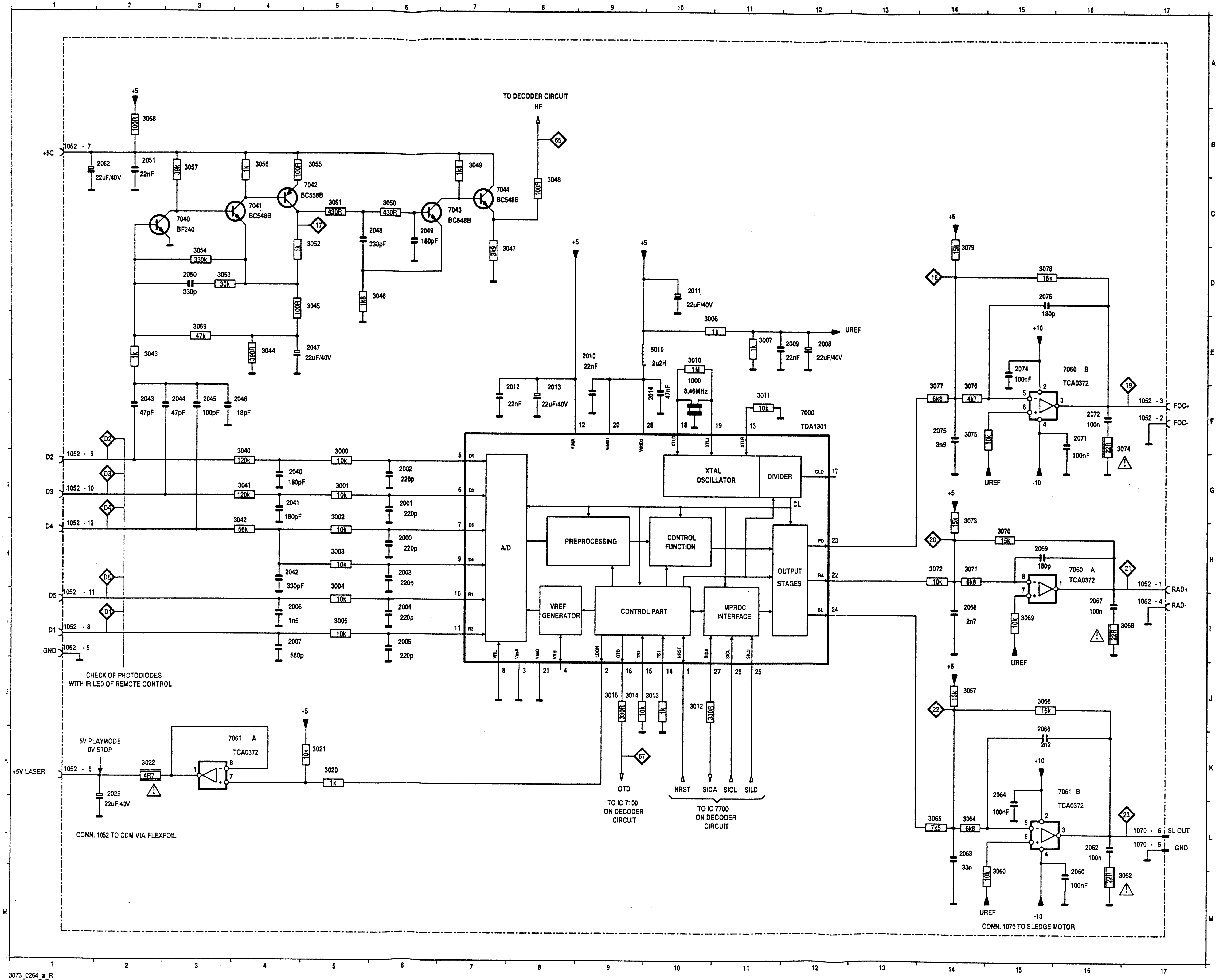
/01 VERSION


CONNECTOR
RED
BLUE
BLACK
230V
120V
VOLTAGE SELECTOR
FIXED MAINS CORD
THERMAL FUSE NOT SERVICEABLE
5.7V ∿
25.8V ∿
10.1V ∿
GND
10.1V ∿
RED
RED
BLUE
WHITE
GREEN
WHITE
1
2
3
4
5
6

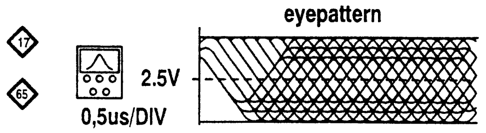
POSITION	MAINS VOLTAGE	SERVICE CODE
120V	110V-127V	4822 146 31338
230V	220V-240V	

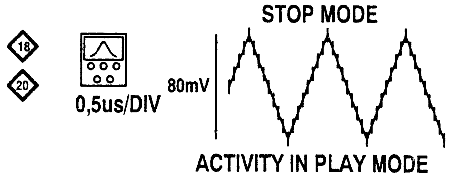
TRANSFORMER AND VOLTAGE SELECTOR ARE ONE ASSEMBLY

ERVO CIRCUIT DIAGRAM


1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
A
B
C
D
E
F
G
H
I
J
K
L
M
+5
3058
100R
TO DECODER CIRCUIT
HF
65
+5C
1052 - 7
2052
22uF/40V
2051
22nF
39k
3057
1k
3056
100R
3055
1k8
3049
3048
100R
7040
BF240
7041
BC548B
7042
BC558B
7043
BC548B
7044
BC548B
3051
430R
3050
430R
17
1k
3052
2048
330pF
2049
180pF
3k9
3047
3054
330k
2050
330p
3053
30k
100R
3045
1k8
3046
3059
47k
390R
3044
2047
22uF/40V
1k
3043
2043
47pF
2044
47pF
2045
100pF
2046
18pF
+5
+5
2011
22uF/40V
3006
1k
UREF
3007
1k
2009
22nF
2008
22uF/40V
5010
2u2H
2010
22nF
3010
1M
1000
8,46MHz
2014
47nF
2012
22nF
2013
22uF/40V
3011
10k
7000
TDA1301
D2
1052 - 9
D3
1052 - 10
D4
1052 - 12
D5
1052 - 11
D1
1052 - 8
GND
1052 - 5
3040
120k
3041
120k
3042
56k
2040
180pF
2041
180pF
2042
330pF
2006
1n5
2007
560p
3000
10k
3001
10k
3002
10k
3003
10k
3004
10k
3005
10k
2002
220p
2001
220p
2000
220p
2003
220p
2004
220p
2005
220p
A/D
PREPROCESSING
CONTROL FUNCTION
XTAL OSCILLATOR
DIVIDER
CLO
CL
OUTPUT STAGES
FO
RA
SL
VREF GENERATOR
CONTROL PART
MPROC INTERFACE
VssA
VddD1
VddD2
XTLO
XTLI
XTLR
VRL
VssA
VssD
VRH
LDON
OTD
TS2
TS1
NRST
SIDA
SICL
SILD
12
20
28
18
19
13
17
23
22
24
5
6
7
9
10
11
8
3
21
4
2
16
15
14
1
27
26
25
3015
330R
3014
10k
3013
1k
3012
330R
67
OTD
TO IC 7100 ON DECODER CIRCUIT
NRST
SIDA
SICL
SILD
TO IC 7700 ON DECODER CIRCUIT
CHECK OF PHOTODIODES WITH IR LED OF REMOTE CONTROL
5V PLAYMODE
0V STOP
+5V LASER
1052 - 6
3022
4R7
2025
22uF/40V
7061 A
TCA0372
+5
10k
3021
3020
1k
CONN. 1052 TO CDM VIA FLEXFOIL
+5
15k
3079
18
3078
15k
2076
180p
+10
2074
100nF
7060 B
TCA0372
3077
6k8
3076
4k7
2075
3n9
3075
10k
UREF
-10
2072
100n
2071
100nF
22R
3074
19
1052 - 3
FOC+
1052 - 2
FOC-
+5
15k
3073
20
3070
15k
2069
180p
7060 A
TCA0372
3072
10k
3071
6k8
2068
2n7
10k
3069
UREF
2067
100n
22R
3068
21
1052 - 1
RAD+
1052 - 4
RAD-
+5
15k
3067
22
3066
15k
2066
2n2
+10
2064
100nF
7061 B
TCA0372
3065
7k5
3064
6k8
2063
33n
10k
3060
UREF
-10
2062
100n
2060
100nF
22R
3062
23
1070 - 6
SL OUT
1070 - 5
GND
CONN. 1070 TO SLEDGE MOTOR
3073_0264_a_R
3073_0264_a_B

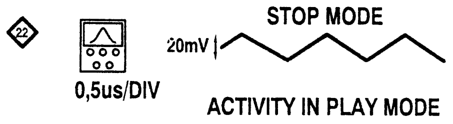
1000	E10
1052	H17
1052	F17
1052	F17
1052	I17
1052	I 1
1052	K 1
1052	B 1
1052	I 1
1052	G 1
1052	G 1
1052	I 1
1052	H 1
1070	L17
1070	L17
2000	H 6
2001	G 6
2002	G 6
2003	H 6
2004	I 6
2005	I 6
2006	I 4
2007	I 4
2008	E12
2009	E12
2010	E 9
2011	D10
2012	F 8
2013	F 8
2014	F10
2025	K 2
2040	G 4
2041	G 4
2042	H 4
2043	F 2
2044	F 3
2045	F 3
2046	F 4
2047	E 5
2048	C 6
2049	C 6
2050	D 3
2051	B 2
2052	B 2
2060	M16
2062	L16
2063	L14
2064	K15
2066	J15
2067	I16
2068	I14
2069	H15
2071	F16
2072	F16
2074	E15
2075	F14
2076	D15
3000	G 5
3001	G 5
3002	G 5
3003	H 5
3004	H 5
3005	I 5
3006	E10
3007	E11
3010	E10
3011	F11
3012	J10
3013	J10
3014	J 9
3015	J 9
3020	K 5
3021	K 5
3022	K 2
3040	G 4
3041	G 4
3042	H 4
3043	E 2
3044	E 4
3045	D 5
3046	D 6
3047	D 8
3048	C 8
3049	B 7
3050	C 6
3051	C 5
3052	D 5
3053	D 3
3054	D 3
3055	B 5
3056	B 4
3057	B 3
3058	B 2
3059	E 3
3060	M15
3062	M17
3064	L14
3065	L14
3066	J15
3067	J14
3068	I17
3069	I15
3070	H15
3071	H14
3072	H14
3073	G14
3074	F17
3075	F14
3076	F14
3077	F14
3078	D15
3079	D14
5010	E10
7000	F12
7040	C 3
7041	C 4
7042	C 5
7043	C 7
7044	C 7
7060	H16
7060	E16
7061	K 4
7061	K16





(19) ACTIVITY DURING PLAY

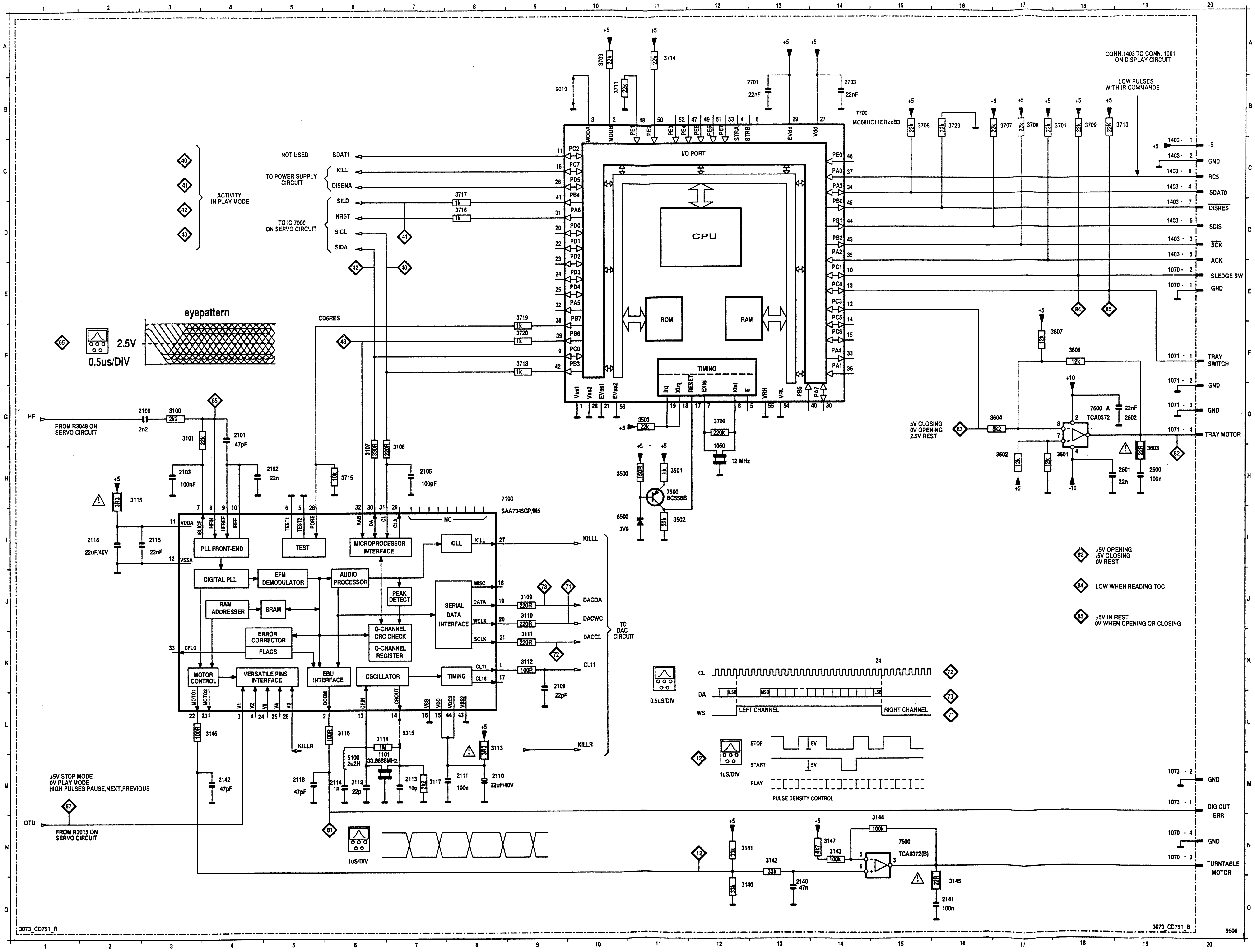
(21) ACTIVITY DURING PLAY



(23) SERVICE MODE 0
SL OUT: -3.5V
SL IN: +3.5V

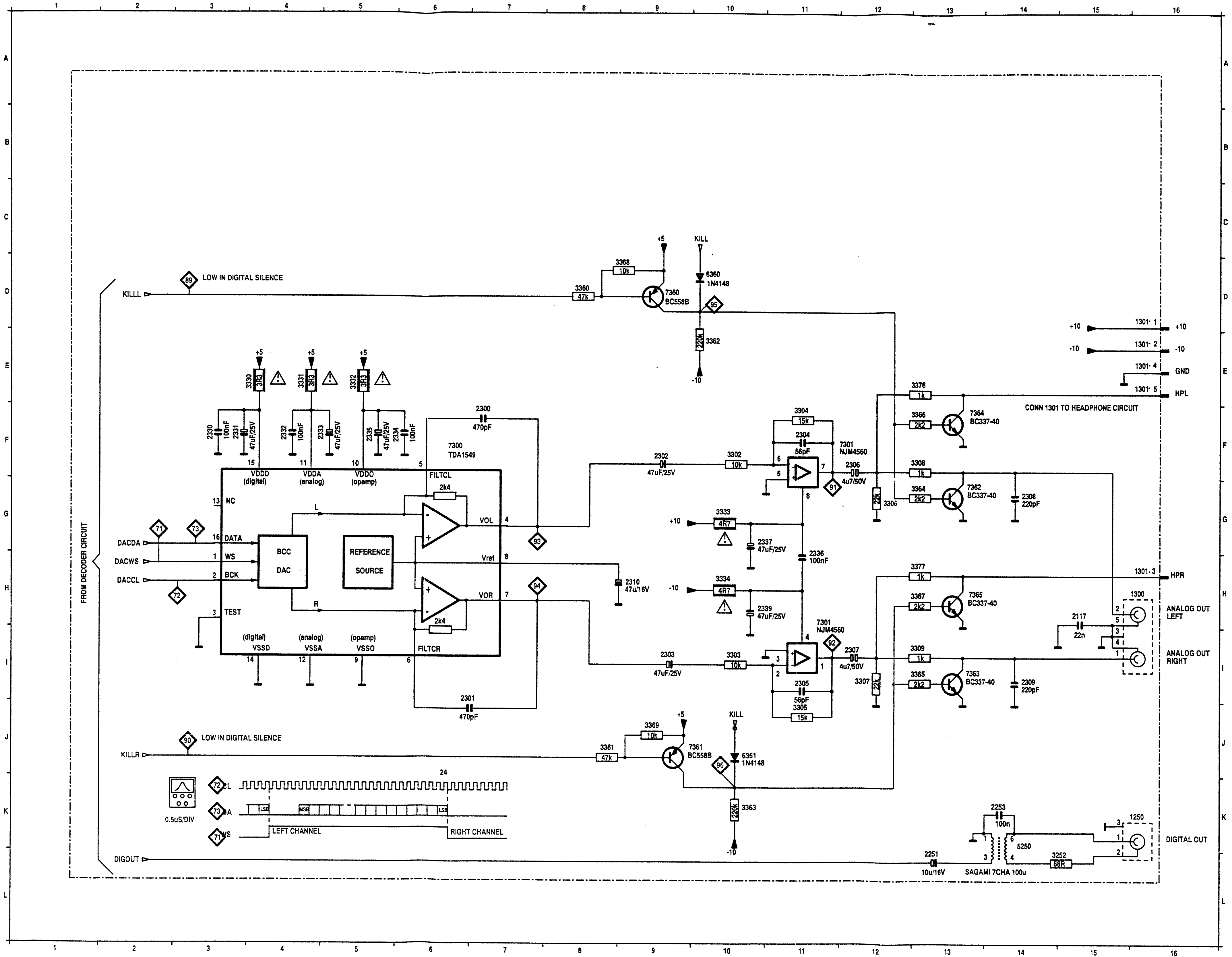
(67) +5V STOP MODE
0V PLAY MODE
HIGH PULSES PAUSE,NEXT,PREVIOUS

DECODER CIRCUIT DIAGRAM


7700
MC68HC11ERxxB3
I/O PORT
CPU
ROM
RAM
TIMING
7100
SAA7345GP/M5
PLL FRONT-END
TEST
MICROPROCESSOR INTERFACE
KILL
DIGITAL PLL
EFM DEMODULATOR
AUDIO PROCESSOR
PEAK DETECT
SERIAL DATA INTERFACE
RAM ADDRESSER
SRAM
ERROR CORRECTOR
FLAGS
Q-CHANNEL CRC CHECK
Q-CHANNEL REGISTER
MOTOR CONTROL
VERSATILE PINS INTERFACE
EBU INTERFACE
OSCILLATOR
TIMING
NOT USED
SDAT1
TO POWER SUPPLY CIRCUIT
KILLI
DISENA
TO IC 7000 ON SERVO CIRCUIT
SILD
NRST
SICL
SIDA
ACTIVITY IN PLAY MODE
CD6RES
eyepattern
2.5V
0,5us/DIV
HF
FROM R3048 ON SERVO CIRCUIT
KILLL
DACDA
DACWC
DACCL
CL11
TO DAC CIRCUIT
KILLR
+5V STOP MODE
0V PLAY MODE
HIGH PULSES PAUSE,NEXT,PREVIOUS
OTD
FROM R3015 ON SERVO CIRCUIT
1uS/DIV
0.5uS/DIV
CL
DA
WS
LSB
MSB
LEFT CHANNEL
RIGHT CHANNEL
STOP
START
PLAY
5V
PULSE DENSITY CONTROL
CONN.1403 TO CONN. 1001 ON DISPLAY CIRCUIT
LOW PULSES WITH IR COMMANDS
RC5
SDATO
DISRES
SDIS
SCK
ACK
SLEDGE SW
GND
TRAY SWITCH
TRAY MOTOR
5V CLOSING
0V OPENING
2.5V REST
7600 A
TCA0372
7600
TCA0372(B)
7500
BC558B
12 MHz
33,8688MHz
DIG OUT ERR
TURNTABLE MOTOR
+5V OPENING
-5V CLOSING
0V REST
LOW WHEN READING TOC
+5V IN REST
0V WHEN OPENING OR CLOSING
3073_CD751_R
3073_CD751_B
9606

1050	H12
1070	E19
1070	E19
1070	N19
1070	N19
1071	F19
1071	F19
1071	G19
1071	G19
1073	M19
1073	M19
1101	M 6
1403	C19
1403	C19
1403	D19
1403	C19
1403	D19
1403	D19
1403	D19
1403	C19
2100	G 2
2101	G 4
2102	H 5
2103	H 3
2105	H 7
2109	K 9
2110	M 8
2111	M 8
2112	M 6
2113	M 7
2114	M 6
2115	I 3
2116	I 2
2118	M 5
2140	O13
2141	O16
2142	M 4
2600	H19
2601	H19
2602	G19
2701	B13
2703	B14
3100	G 3
3101	G 3
3107	H 6
3108	H 7
3109	J 9
3110	J 9
3111	K 9
3112	K 9
3113	L 8
3114	L 6
3115	H 2
3116	L 6
3117	M 7
3140	O12
3141	N12
3142	N13
3143	N14
3144	N15
3145	O16
3146	L 4
3147	N14
3500	H10
3501	H11
3502	I11
3503	G11
3601	H18
3602	H17
3603	H19
3604	G16
3606	F18
3607	F17
3700	G12
3701	B18
3703	A10
3706	B15
3707	B17
3708	B17
3709	B18
3710	B19
3711	B10
3714	A11
3715	H 6
3716	D 8
3717	C 8
3718	F 9
3719	E 9
3720	F 9
3723	B16
5100	M 6
6500	I10
7100	H 8
7500	H11
7600	G18
7600	N15
7700	B14
9010	B 9
9315	L 7

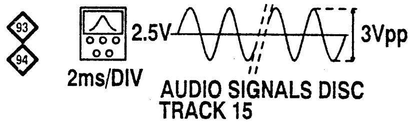
DAC CIRCUIT DIAGRAM


1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
A B C D E F G H I J K L
FROM DECODER CIRCUIT
KILLL
89 LOW IN DIGITAL SILENCE
3360 47k
3368 10k
+5
KILL
7360 BC558B
6360 1N4148
95
3362 220k
-10
+5 +5 +5
3330 3R3
3331 3R3
3332 3R3
2330 100nF
2331 47uF/25V
2332 100nF
2333 47uF/25V
2335 47uF/25V
2334 100nF
2300 470pF
7300 TDA1549
15 VDDD (digital)
11 VDDA (analog)
10 VDDO (opamp)
5 FILTCL
2k4
13 NC
L
VOL 4
93
71 73
DACDA 16 DATA
DACWS 1 WS
DACCL 2 BCK
72
BCC DAC
REFERENCE SOURCE
Vref 8
R
VOR 7
94
3 TEST
2k4
(digital) VSSD 14
(analog) VSSA 12
(opamp) VSSO 9
FILTCR 6
2301 470pF
2310 47u/16V
2302 47uF/25V
3302 10k
3304 15k
2304 56pF
6 5 7 8
7301 NJM4560
2306 4u7/50V
91
+10 3333 4R7
2337 47uF/25V
2336 100nF
-10 3334 4R7
2339 47uF/25V
7301 NJM4560
4 3 2 1
92
2303 47uF/25V
3303 10k
2307 4u7/50V
2305 56pF
3305 15k
3306 22k
3307 22k
3376 1k
3366 2k2
7364 BC337-40
3308 1k
3364 2k2
7362 BC337-40
2308 220pF
3377 1k
3367 2k2
7365 BC337-40
3309 1k
3365 2k2
7363 BC337-40
2309 220pF
+10 1301- 1 +10
-10 1301- 2 -10
1301- 4 GND
1301- 5 HPL
CONN 1301 TO HEADPHONE CIRCUIT
1301- 3 HPR
1300
2117 22n
2 5 3 4 1
ANALOG OUT LEFT
ANALOG OUT RIGHT
KILLR
90 LOW IN DIGITAL SILENCE
3361 47k
3369 10k
+5
KILL
7361 BC558B
6361 1N4148
96
3363 220k
-10
0.5uS/DIV
72 CL
73 DA
71 WS
24
LSB MSB LSB
LEFT CHANNEL
RIGHT CHANNEL
DIGOUT
2251 10u/16V
2253 100n
1 3 6 4
5250
SAGAMI 7CHA 100u
3252 68R
1250
3 1 2
DIGITAL OUT

3073_CD751C_R

3073_CD751C_B

1250	K15
1300	H15
1301	D16
1301	E16
1301	H16
1301	E16
1301	E16
2117	H15
2251	L13
2253	K14
2300	F 7
2301	I 6
2302	F 9
2303	I 9
2304	F11
2305	I11
2306	F12
2307	I12
2308	G14
2309	I14
2310	H 9
2330	F 3
2331	F 3
2332	F 4
2333	F 5
2334	F 6
2335	F 5
2336	H11
2337	G10
2339	H10
3252	L15
3302	F10
3303	I10
3304	F11
3305	J11
3306	G12
3307	I12
3308	F13
3309	I13
3330	E 4
3331	E 4
3332	E 5
3333	G10
3334	H10
3360	D 8
3361	J 8
3362	E10
3363	K10
3364	G13
3365	I13
3366	F13
3367	H13
3368	D 9
3369	J 9
3376	E13
3377	H13
5250	K14
6360	D10
6361	J10
7300	F 6
7301	H11
7301	F11
7360	D 9
7361	J 9
7362	G13
7363	I13
7364	F13
7365	H13


93
94
2.5V
3Vpp
2ms/DIV

AUDIO SIGNALS DISC TRACK 15

(91) ANALOG SIGNAL

(92) ANALOG SIGNAL

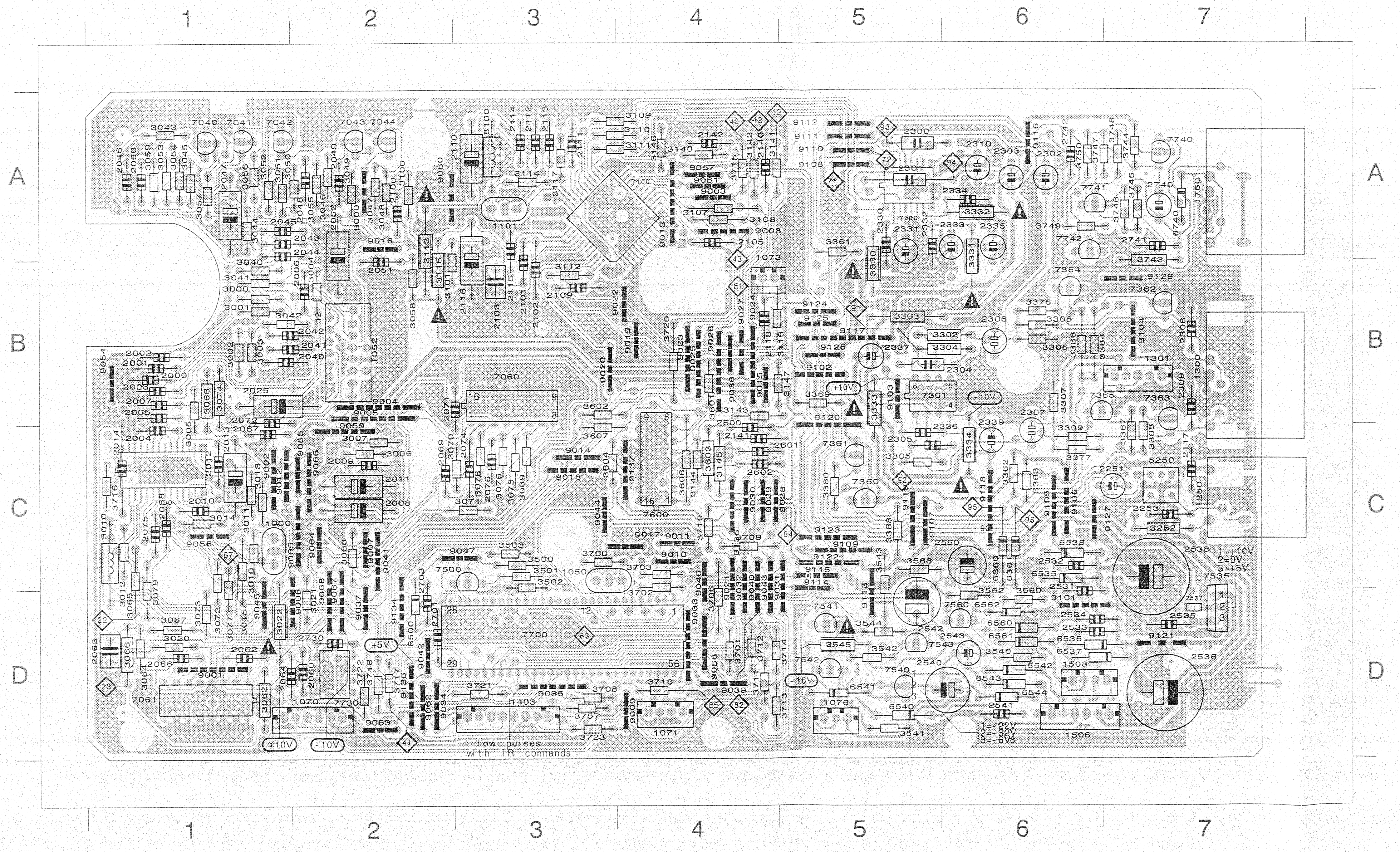
(95) ±8V IN PLAY MODE

(96) ±5V IN STOP MODE

MAIN PANEL COMPONENT SIDE

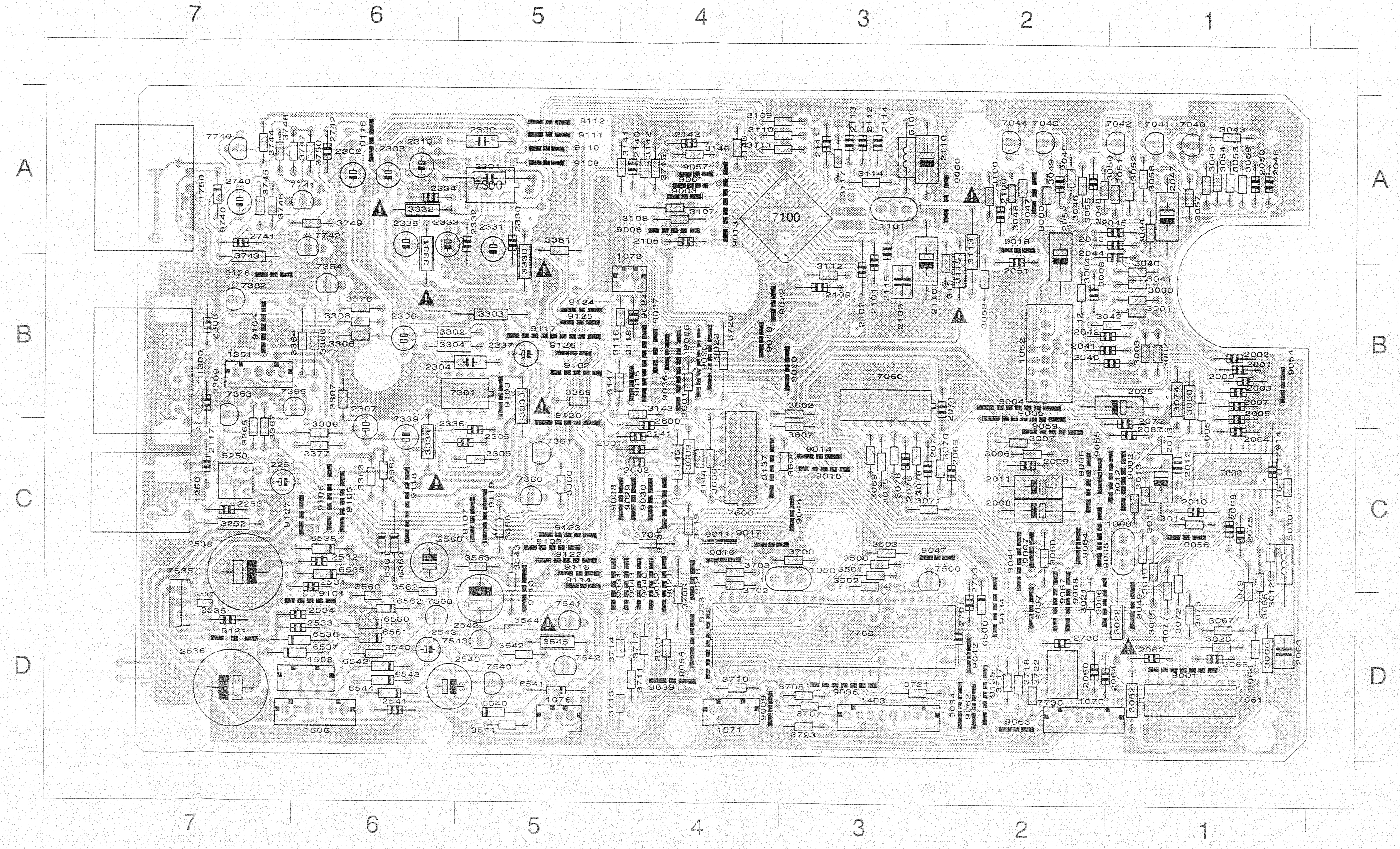
1076	D 5
1250	C 7
1300	B 7
1301	B 7
1506	D 6
1508	D 6
1750	A 7
2117	C 7
2251	C 7
2253	C 7
2300	A 5
2301	A 5
2302	A 6
2303	A 6
2304	B 5
2305	C 5
2306	B 6
2307	C 6
2308	B 7
2309	B 7
2310	A 6
2330	A 5
2331	A 5
2332	A 5
2333	A 6
2334	A 6
2335	A 6
2336	C 5
2337	B 5
2339	C 6
2531	D 6
2532	C 6
2533	D 6
2534	D 6
2535	D 7
2536	D 7
2538	C 7
2540	D 6
2541	D 6
2542	D 5
2543	D 6
2560	C 6
2740	A 7
2741	A 7
2742	A 6
3252	C 7
3302	B 6
3303	B 5
3304	B 6
3305	C 5
3306	B 6
3307	B 6
3308	B 6
3309	C 6
3330	B 5
3331	A 6
3332	A 6
3333	B 5
3334	C 6
3360	C 5
3361	A 5
3362	C 6
3363	C 6
3364	B 6
3365	C 7
3366	B 6
3367	C 7
3368	C 5
3369	B 5
3376	B 6
3377	C 6
3540	D 6
3541	D 5
3542	D 5
3543	C 5
3544	D 5
3545	D 5
3560	D 6
3562	D 6
3563	C 5
3743	B 7
3744	A 7
3745	A 7
3746	A 7
3747	A 7
3748	A 7
3749	A 6
3750	A 6
5250	C 7
6360	C 6
6361	C 6
6535	C 6
6536	D 6
6537	D 6
6538	C 6
6540	D 5
6541	D 5
6542	D 6
6543	D 6
6544	D 6
6560	D 6
6561	D 6
6562	D 6
6740	A 7
7301	B 5
7360	C 5
7361	C 5
7362	B 7
7363	B 7
7364	B 6
7365	B 6
7535	D 7
7540	D 5
7541	D 5
7542	D 5
7543	D 5
7560	D 6
7740	A 7
7741	A 6
7742	A 6
9101	D 6
9102	B 5
9103	B 5
9104	B 7
9105	C 6
9106	C 6
9107	C 5
9108	A 5
9109	C 5
9110	A 5
9111	A 5
9112	A 5
9113	D 5
9114	C 5
9115	C 5
9116	A 6
9117	B 5
9118	C 6
9119	C 5
9120	C 5
9121	D 7
9122	C 5
9123	C 5
9124	B 5
9125	B 5
9126	B 5
9127	C 6
9128	B 7

1000	C 1
1050	C 3
1052	B 2
1070	D 2
1071	D 4
1073	B 4
1101	A 3
1403	D 3
2000	B 1
2001	B 1
2002	B 1
2003	B 1
2004	C 1
2005	B 1
2006	B 2
2007	B 1
2008	C 2
2009	C 2
2010	C 1
2011	C 2
2012	C 1
2013	C 1
2014	C 1
2025	B 1
2040	B 1
2041	B 1
2042	B 1
2043	A 1
2044	A 1
2045	A 1
2046	A 1
2047	A 1
2048	A 2
2049	A 2
2050	A 1
2051	B 2
2052	A 2
2060	D 2
2062	D 1
2063	D 1
2064	D 1
2066	D 1
2067	C 1
2068	C 1
2069	C 2
2071	B 3
2072	B 1
2074	C 3
2075	C 1
2076	C 3
2100	A 2
2101	B 3
2102	B 3
2103	B 3
2105	A 4
2109	B 3
2110	A 3
2111	A 3
2112	A 3
2113	A 3
2114	A 3
2115	A 3
2116	B 3
2118	B 4
2140	A 4
2141	C 4
2142	A 4
2600	C 4
2601	C 4
2602	C 4
2701	D 2
2703	D 2
2730	D 2
3000	B 1
3001	B 1
3002	B 1
3003	B 1
3004	B 2
3005	B 1
3006	C 2
3007	C 2
3010	C 1
3011	C 1
3012	C 1
3013	C 1
3014	C 1
3015	C 1
3020	D 1
3021	D 2
3022	D 1
3040	B 1
3041	B 1
3042	B 1
3043	A 1
3044	A 1
3045	A 1
3046	A 2
3047	A 2
3048	A 2
3049	A 2
3050	A 2
3051	A 1
3052	A 1
3053	A 1
3054	A 1
3055	A 2
3056	A 1
3057	A 1
3058	B 2
3059	A 1
3060	C 2
3062	D 1
3064	D 1
3065	C 1
3066	D 1
3067	D 1
3068	B 1
3069	C 3
3070	C 3
3071	C 3
3072	C 1
3073	D 1
3074	B 1
3075	C 3
3076	C 3
3077	C 1
3078	C 3
3079	D 1
3100	A 2
3101	B 2
3107	A 4
3108	A 4
3109	A 3
3110	A 3
3111	A 3
3112	B 3
3113	A 2
3114	A 3
3115	B 2
3116	B 4
3117	A 3
3140	A 4
3141	A 4
3142	A 4
3143	B 4
3144	C 4
3145	C 4
3146	A 4
3147	B 4
3500	C 3
3501	C 3
3502	C 3
3503	C 3
3601	B 4
3602	B 3
3603	C 4
3604	C 3
3606	C 4
3607	C 3
3700	C 3
3701	D 4
3702	C 4
3703	C 4
3706	D 4
3707	D 3
3708	D 3
3709	C 4
3710	D 4
3711	D 4
3712	D 4
3713	D 4
3714	D 4
3715	A 4
3716	C 1
3717	D 2
3718	D 2
3719	C 4
3720	B 4
3721	D 3
3722	D 2
3723	D 3
5010	C 1
5100	A 3
6500	D 2
7040	A 1
7041	A 1
7042	A 1
7043	A 2
7044	A 2
7060	B 3
7061	D 1
7500	C 3
7600	C 4
7700	D 3
7730	D 2
9000	A 2
9001	D 1
9002	C 1
9003	A 4
9004	B 2
9005	B 2
9006	D 2
9007	C 2
9008	A 4
9009	D 4
9010	C 4
9011	C 4
9012	C 1
9013	A 4
9014	C 3
9015	B 4
9016	A 2
9017	C 4
9018	C 3
9019	B 4
9020	B 3
9021	C 4
9022	B 4
9023	B 4
9024	B 4
9025	B 4
9026	B 4
9027	B 4
9028	C 4
9029	C 4
9030	C 4
9031	C 5
9032	C 4
9033	D 4
9034	D 2
9035	D 3
9036	B 4
9037	D 2
9039	D 4
9040	C 4
9041	C 2
9042	D 2
9043	C 4
9044	C 3
9045	D 1
9046	C 4
9047	C 3
9054	B 1
9055	C 2
9056	C 1
9057	A 4
9058	D 4
9059	C 2
9060	A 2
9061	A 4
9062	D 2
9063	D 2
9064	C 2
9065	C 2
9066	C 2
9067	D 2
9068	D 2
9134	D 2
9135	D 2
9136	C 4
9137	C 4



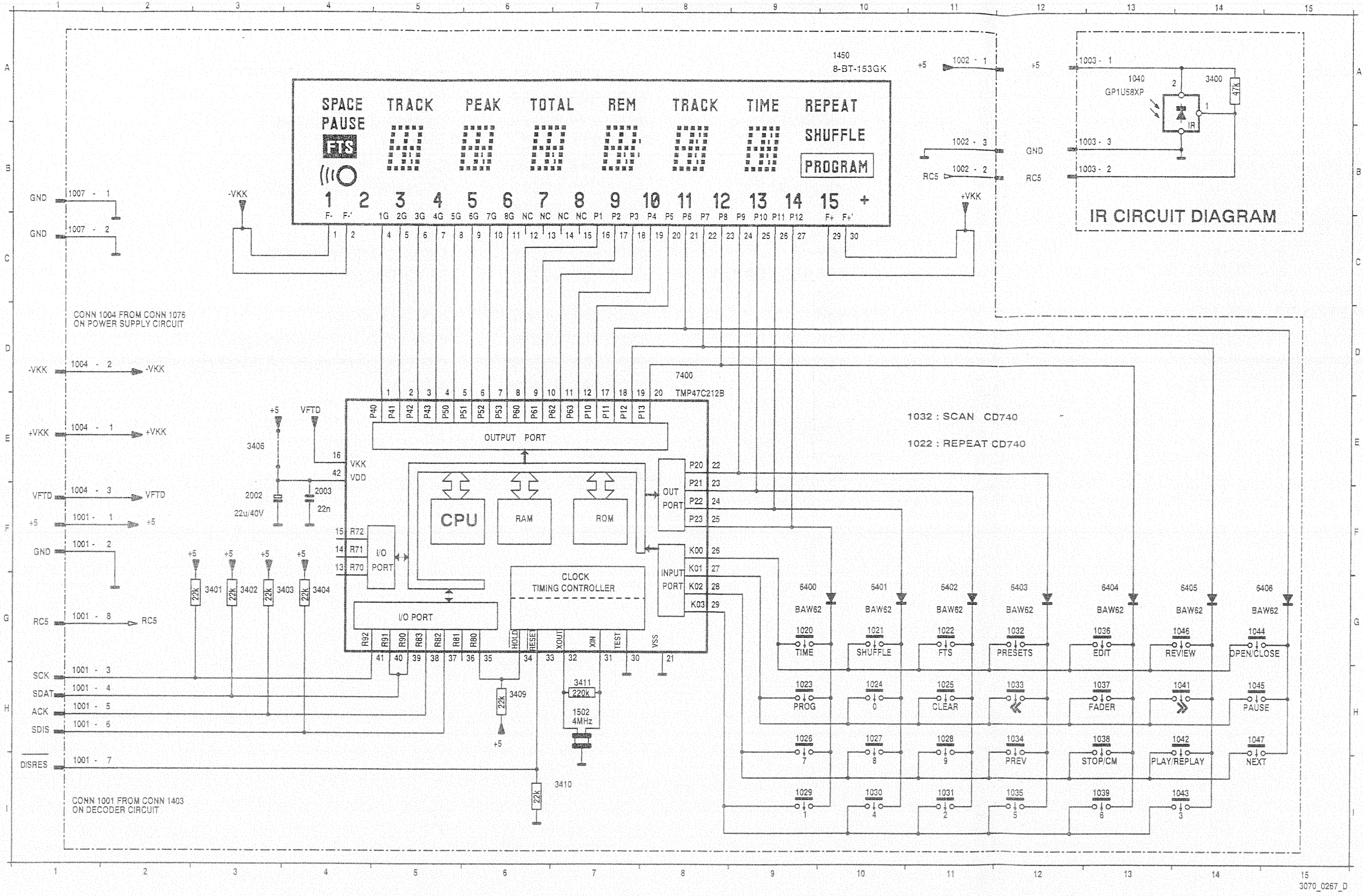
MAIN PANEL SOLDER SIDE

1076	D 5
1250	C 7
1300	B 7
1301	B 7
1506	D 6
1508	D 6
1750	A 7
2117	C 7
2251	C 7
2253	C 7
2300	A 5
2301	A 5
2302	A 6
2303	A 6
2304	B 5
2305	C 5
2306	B 6
2307	C 6
2537	D 7
2308	B 7
2309	B 7
2310	A 6
2330	A 5
2331	A 5
2332	A 5
2333	A 6
2334	A 6
2335	A 6
2336	C 5
2337	B 5
2339	C 6
2531	D 6
2532	C 6
2533	D 6
2534	D 6
2535	D 7
2536	D 7
7300	A 5
2538	C 7
2540	D 6
2541	D 6
2542	D 5
2543	D 6
2560	C 6
2740	A 7
2741	A 7
2742	A 6
3252	C 7
3302	B 6
3303	B 5
3304	B 6
3305	C 5
3306	B 6
3307	B 6
3308	B 6
3309	C 6
- - - -	
3330	B 5
3331	A 6
3332	A 6
3333	B 5
3334	C 6
3360	C 5
3361	A 5
3362	C 6
3363	C 6
3364	B 6
3365	C 7
3366	B 6
3367	C 7
3368	C 5
3369	B 5
3376	B 6
3377	C 6
3540	D 6
7000	C 1
3541	D 5
3542	D 5
3543	C 5
3544	D 5
3545	D 5
3560	D 6
3562	D 6
3563	C 5
3743	B 7
3744	A 7
3745	A 7
3746	A 7
3747	A 7
3748	A 7
3749	A 6
3750	A 6
5250	C 7
6360	C 6
7100	A 3
6361	C 6
6535	C 6
6536	D 6
6537	D 6
6538	C 6
6540	D 5
6541	D 5
6542	D 6
6543	D 6
6544	D 6
6560	D 6
6561	D 6
6562	D 6
6740	A 7
7301	B 5
7360	C 5
7361	C 5
7362	B 7
7363	B 7
7364	B 6
7365	B 6
7535	D 7
7540	D 5
7541	D 5
7542	D 5
7543	D 5
7560	D 6
7740	A 7
7741	A 6
7742	A 6
9101	D 6
9102	B 5
9103	B 5
9104	B 7
9105	C 6
9106	C 6
9107	C 5
9108	A 5
9109	C 5
9110	A 5
9111	A 5
9112	A 5
9113	D 5
9114	C 5
9115	C 5
9116	A 6
9117	B 5
9118	C 6
9119	C 5
9120	C 5
9121	D 7
9122	C 5
9123	C 5
9124	B 5
9125	B 5
9126	B 5
9127	C 6
9128	B 7
- - - -	
1000	C 1
1050	C 3
1052	B 2
1070	D 2
1071	D 4
1073	B 4
1101	A 3
1403	D 3
2000	B 1
2001	B 1
2002	B 1
2003	B 1
2004	C 1
2005	B 1
2006	B 2
2007	B 1
2008	C 2
2009	C 2
2010	C 1
2011	C 2
2012	C 1
2013	C 1
2014	C 1
2025	B 1
2040	B 1
2041	B 1
2042	B 1
2043	A 1
2044	A 1
2045	A 1
2046	A 1
2047	A 1
2048	A 2
2049	A 2
2050	A 1
2051	B 2
2052	A 2
2060	D 2
2062	D 1
2063	D 1
2064	D 1
2066	D 1
2067	C 1
2068	C 1
2069	C 2
2071	B 3
2072	B 1
2074	C 3
2075	C 1
2076	C 3
2100	A 2
2101	B 3
2102	B 3
2103	B 3
2105	A 4
2109	B 3
2110	A 3
2111	A 3
2112	A 3
2113	A 3
2114	A 3
2115	A 3
2116	B 3
2118	B 4
2140	A 4
2141	C 4
2142	A 4
2600	C 4
2601	C 4
2602	C 4
2701	D 2
2703	D 2
2730	D 2
3000	B 1
3001	B 1
3002	B 1
3003	B 1
3004	B 2
3005	B 1
3006	C 2
3007	C 2
3010	C 1
3011	C 1
3012	C 1
3013	C 1
3014	C 1
3015	C 1
3020	D 1
3021	D 2
3022	D 1
3040	B 1
3041	B 1
3042	B 1
3043	A 1
3044	A 1
3045	A 1
3046	A 2
3047	A 2
3048	A 2
3049	A 2
3050	A 2
3051	A 1
3052	A 1
3053	A 1
3054	A 1
3055	A 2
3056	A 1
3057	A 1
3058	B 2
3059	A 1
3060	C 2
3062	D 1
3064	D 1
3065	C 1
3066	D 1
3067	D 1
3068	B 1
3069	C 3
3070	C 3
3071	C 3
3072	C 1
3073	D 1
3074	B 1
3075	C 3
3076	C 3
3077	C 1
3078	C 3
3079	D 1
3100	A 2
3101	B 2
3107	A 4
3108	A 4
3109	A 3
3110	A 3
3111	A 3
3112	B 3
3113	A 2
3114	A 3
3115	B 2
3116	B 4
3117	A 3
3140	A 4
3141	A 4
3142	A 4
3143	B 4
3144	C 4
3145	C 4
3146	A 4
3147	B 4
3500	C 3
3501	C 3
3502	C 3
3503	C 3
3601	B 4
3602	B 3
3603	C 4
3604	C 3
3606	C 4
3607	C 3
3700	C 3
3701	D 4
3702	C 4
3703	C 4
3706	D 4
3707	D 3
3708	D 3
3709	C 4
3710	D 4
3711	D 4
3712	D 4
3713	D 4
3714	D 4
3715	A 4
3716	C 1
3717	D 2
3718	D 2
3719	C 4
3720	B 4
3721	D 3
3722	D 2
3723	D 3
5010	C 1
5100	A 3
6500	D 2
7040	A 1
7041	A 1
7042	A 1
7043	A 2
7044	A 2
7060	B 3
7061	D 1
7500	C 3
7600	C 4
7700	D 3
7730	D 2
9000	A 2
9001	D 1
9002	C 1
9003	A 4
9004	B 2
9005	B 2
9006	D 2
9007	C 2
9008	A 4
9009	D 4
9010	C 4
9011	C 4
9012	C 1
9013	A 4
9014	C 3
9015	B 4
9016	A 2
9017	C 4
9018	C 3
9019	B 4
9020	B 3
9021	C 4
9022	B 4
9023	B 4
9024	B 4
9025	B 4
9026	B 4
9027	B 4
9028	C 4
9029	C 4
9030	C 4
9031	C 5
9032	C 4
9033	D 4
9034	D 2
9035	D 3
9036	B 4
9037	D 2
9039	D 4
9040	C 4
9041	C 2
9042	D 2
9043	C 4
9044	C 3
9045	D 1
9046	C 4
9047	C 3
9054	B 1
9055	C 2
9056	C 1
9057	A 4
9058	D 4
9059	C 2
9060	A 2
9061	A 4
9062	D 2
9063	D 2
9064	C 2
9065	C 2
9066	C 2
9067	D 2
9068	D 2
9134	D 2
9135	D 2
9136	C 4
9137	C 4

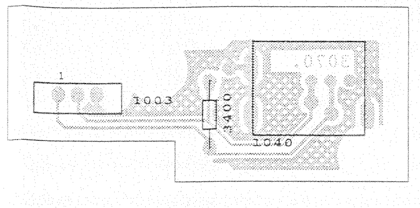


CONTROL & DISPLAY CIRCUIT DIAGRAM

1001	F 1
1001	F 1
1001	H 1
1001	H 1
1001	H 1
1001	H 1
1001	I 1
1001	G 1
1002	A11
1002	B11
1002	B11
1003	A13
1003	B13
1003	B13
1004	E 1
1004	D 1
1004	F 1
1007	B 1
1007	C 1
1020	G 9
1021	G10
1022	G11
1023	H 9
1024	H10
1025	H11
1026	H 9
1027	H10
1028	H11
1029	I 9
1030	I10
1031	I11
1032	G12
1033	H12
1034	H12
1035	I12
1036	G13
1037	H13
1038	H13
1039	I13
1040	A13
1041	H14
1042	H14
1043	I14
1044	G14
1045	H14
1046	G14
1047	H14
1450	A10
1502	H 7
2002	F 3
2003	F 4
3400	A14
3401	G 3
3402	G 3
3403	G 4
3404	G 4
3406	E 4
3409	H 6
3410	I 7
3411	H 7
6400	G 9
6401	G10
6402	G11
6403	G12
6404	G13
6405	G14
6406	G15
7400	D 8

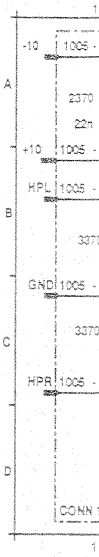

1450
8-BT-153GK
SPACE
PAUSE
FTS
TRACK
PEAK
TOTAL
REM
TRACK
TIME
REPEAT
SHUFFLE
PROGRAM
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 +
F- F-' 1G 2G 3G 4G 5G 6G 7G 8G NC NC NC NC P1 P2 P3 P4 P5 P6 P7 P8 P9 P10 P11 P12 F+ F+'
-VKK
+VKK
+5
1002 - 1
1002 - 3
1002 - 2
GND
RC5
1007 - 1
1007 - 2
CONN 1004 FROM CONN 1075 ON POWER SUPPLY CIRCUIT
-VKK
+VKK
VFTD
1004 - 2
1004 - 1
1004 - 3
1001 - 1
1001 - 2
1001 - 8
1001 - 3
1001 - 4
1001 - 5
1001 - 6
1001 - 7
SCK
SDAT
ACK
SDIS
DISRES
CONN 1001 FROM CONN 1403 ON DECODER CIRCUIT
7400
TMP47C212B
P40 P41 P42 P43 P50 P51 P52 P53 P60 P61 P62 P63 P10 P11 P12 P13
OUTPUT PORT
VKK
VDD
CPU
RAM
ROM
OUT PORT
P20 P21 P22 P23
INPUT PORT
K00 K01 K02 K03
I/O PORT
R72 R71 R70
CLOCK
TIMING CONTROLLER
R92 R91 R90 R83 R82 R81 R80 HOLD RESET XOUT XIN TEST VSS
3406
2002
22u/40V
2003
22n
3401 3402 3403 3404
22K
3409
3411
220K
1502
4MHz
3410
1032 : SCAN CD740
1022 : REPEAT CD740
6400 6401 6402 6403 6404 6405 6406
BAW62
1020 TIME
1021 SHUFFLE
1022 FTS
1032 PRESETS
1036 EDIT
1046 REVIEW
1044 OPEN/CLOSE
1023 PROG
1024 0
1025 CLEAR
1033 «
1037 FADER
1041 »
1045 PAUSE
1026 7
1027 8
1028 9
1034 PREV
1038 STOP/CM
1042 PLAY/REPLAY
1047 NEXT
1029 1
1030 4
1031 2
1035 5
1039 6
1043 3
IR CIRCUIT DIAGRAM
1003 - 1
1003 - 3
1003 - 2
1040
GP1U58XP
3400
47k
IR
3070_0267_D

IR PANEL

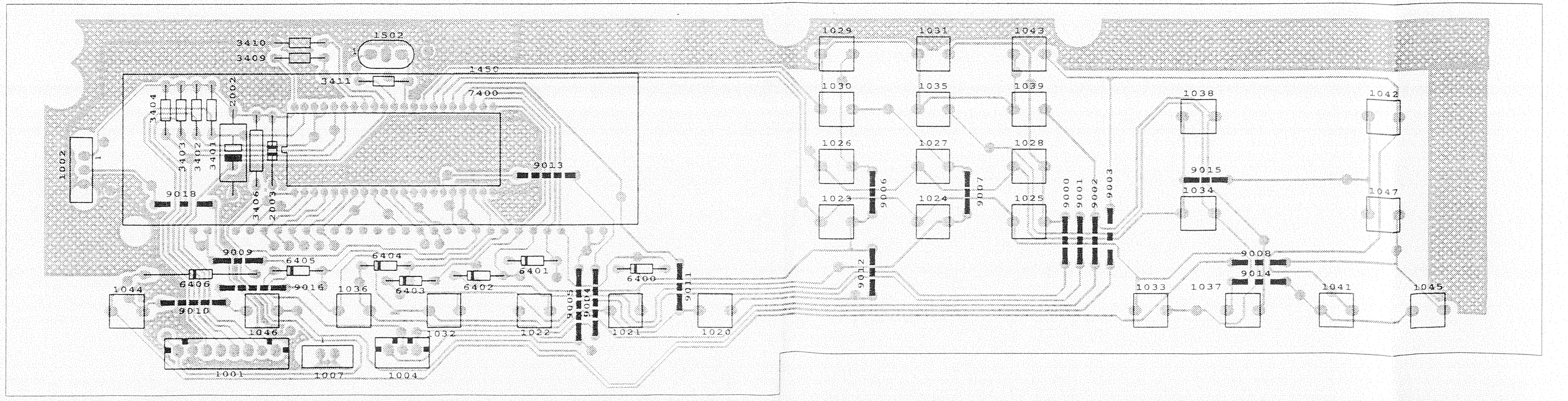

1003
3400
1040
3070

HEADP

1005 B 1
1005 A 1
1005 C 1
1005 C 1
1005 B 1

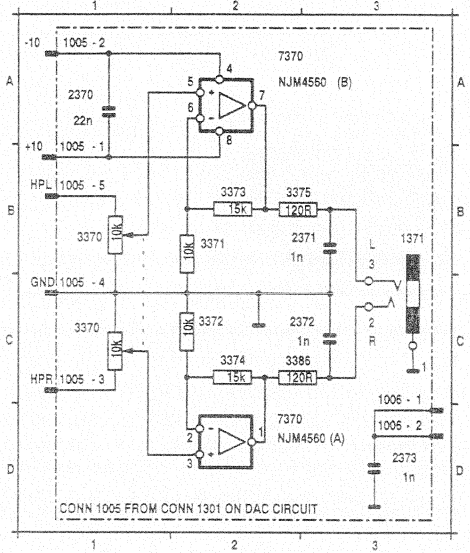

-10
1005
2370
22n
+10
HPL
GND
HPR
CONN

CONTROL & DISPLAY PANEL


3410
3409
1502
3411
1450
7400
3404
3403
3402
3401
2002
3406
2003
1002
9018
9013
9009
6405
6404
6406
9016
1036
6403
6402
6401
6400
1044
9010
1046
1032
1022
1021
1020
1001
1007
1004
9005
9004
9011
9012
1029
1031
1043
1030
1035
1039
1026
1027
1028
1023
1024
1025
9006
9007
9000
9001
9002
9003
1038
1042
9015
1034
1047
9008
9014
1033
1037
1041
1045

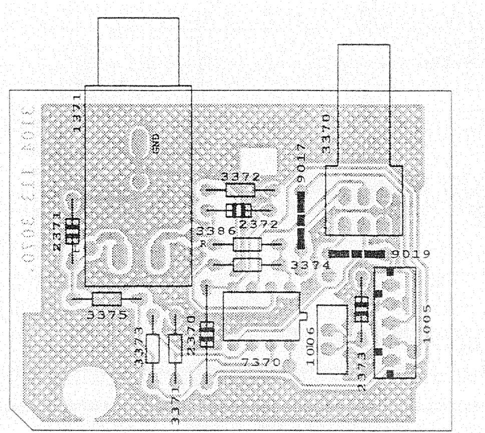
HEADPHONE CIRCUIT DIAGRAM

1005 B 1
1005 A 1
1005 C 1
1005 C 1
1005 B 1
1006 C 3
1006 D 3
1371 B 3
2370 A 1
2371 B 3
2372 C 3
2373 D 3
3370 C 1
3370 B 1
3371 B 2
3372 C 2
3373 B 2
3374 C 2
3375 B 2
3386 C 2
7370 D 2
7370 A 2


1
2
3
A
B
C
D
-10
1005 - 2
7370
NJM4560 (B)
2370
22n
+10
1005 - 1
HPL
1005 - 5
3373
15k
3375
120R
3370
10k
3371
10k
2371
1n
L
1371
GND
1005 - 4
3372
10k
2372
1n
R
HPR
1005 - 3
3374
15k
3386
120R
7370
NJM4560 (A)
1006 - 1
1006 - 2
2373
1n
CONN 1005 FROM CONN 1301 ON DAC CIRCUIT

3070_0267_H

HEADPHONE PANEL


3372
2372
3386
3374
3375
7370
9017
3370
9019
1006
3373
1005
2371
3371
2373
3104 113 3010

PARTS LIST LOADER

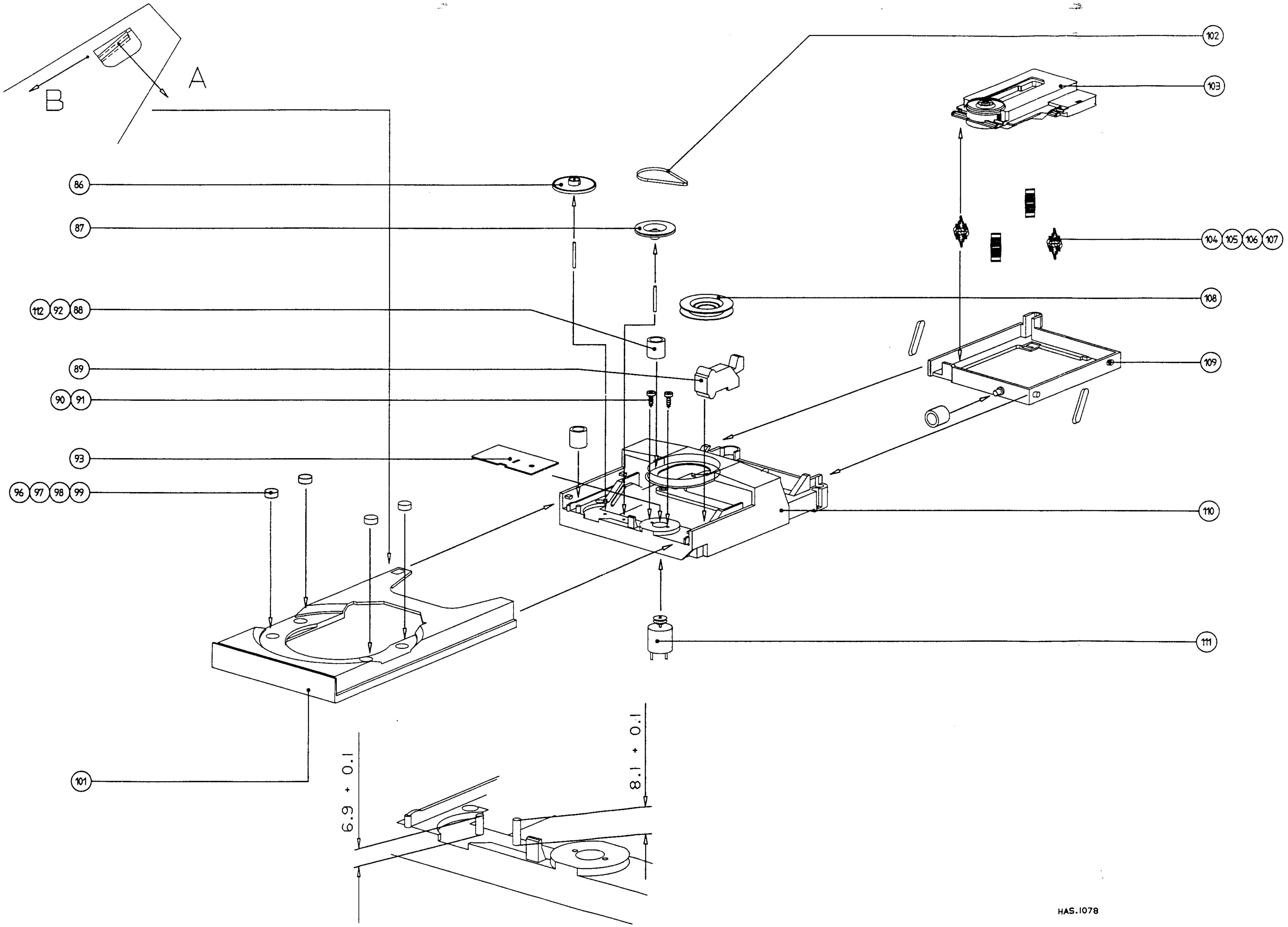
86	4822 528 81464	DRIVE PINION
87	4822 528 81465	PULLEY
88,92,112	4822 325 60379	DAMPING GROMMET
89	4822 276 13222	SWITCH
93	4822 444 60816	COVER PLATE
96,97,98,99	4822 325 80511	ORNAMENTAL TULE
101	4822 444 50679	SLIDE
102	4822 358 31168	BELT
103	4822 691 30278	CDM12 MECHANISM
104,105,106,107	4822 325 50215	SUSPENSION
108	4822 402 61412	CLAMPER ASSY
109	4822 464 50895	SUBCHASSIS
110	4822 464 50678	CHASSIS (CD710/CD720)
110	4822 464 50896	CHASSIS (CD740/CD750/CD911/CD921)
111	4822 361 21492	MOTOR

Screws

90,91	M 2.2 x 4

LOADER

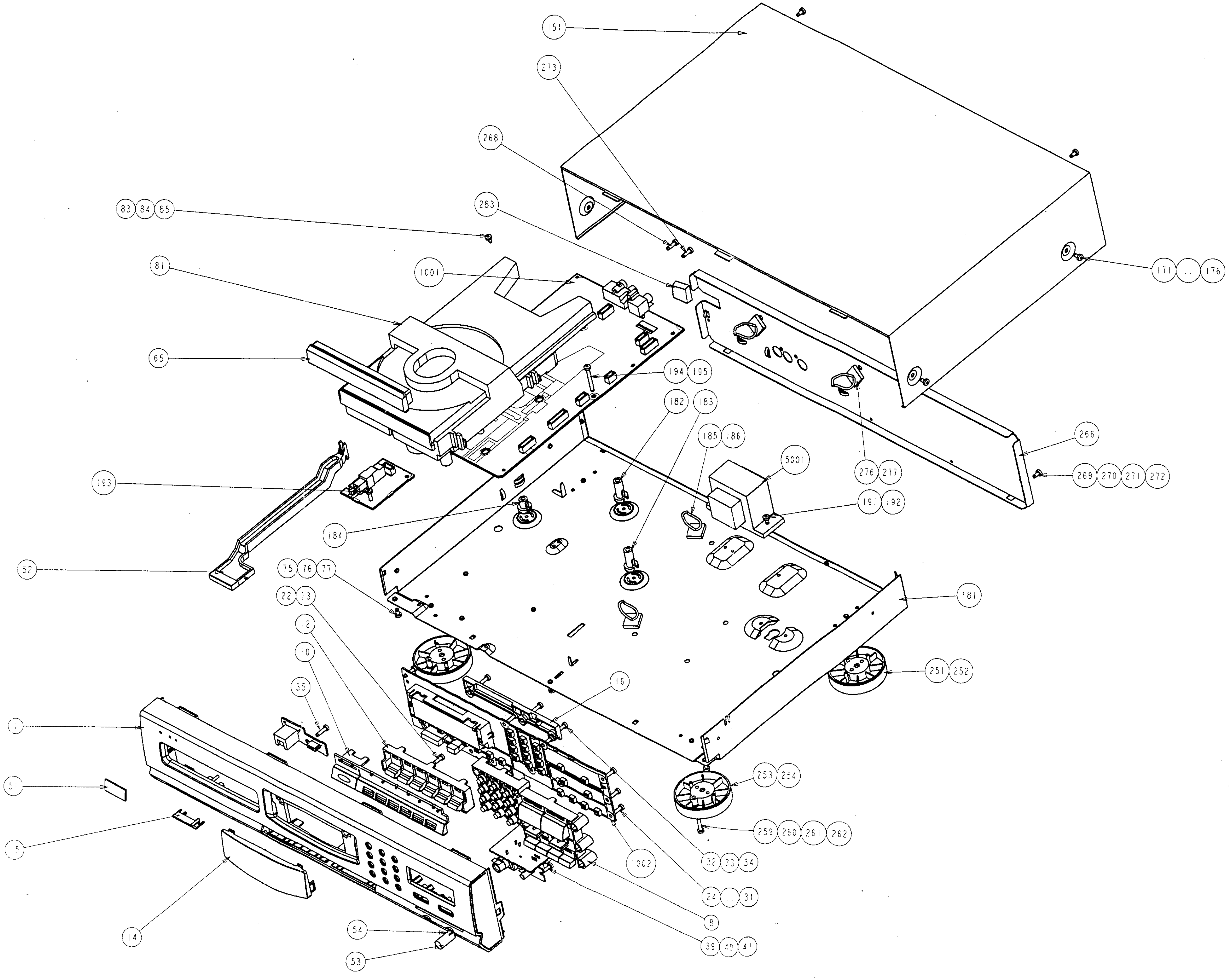
DETAIL I


A
B
86
87
112
92
88
89
90
91
93
96
97
98
99
101
102
103
104
105
106
107
108
109
110
111
6.9 + 0.1
8.1 + 0.1
HAS.1078

EXPLODED VIEW

t.

ate


151
273
268
83 84 85
283
171 .. 176
81
1001
65
194 195
182 183
185 186
5001
266
269 270 271 272
276 277
193
191 192
184
52
75 76 77
22 23
181
12
10
251 252
16
35
1
253 254
51
5
259 260 261 262
1002
32 33 34
24 .. 31
8
14
54
39 40 41
53

MECHANICAL PARTS LIST

1	4822 459 04095	FRONT
8	4822 410 10281	BUTTON UNIT(TEN KEY)
10	4822 410 10282	BUTTON UNIT(OPEN/CLOSE)
12	4822 410 10283	BUTTON UNIT(NOSE)
14	4822 381 11688	WINDOW
15	4822 381 11689	IR WINDOW
16	4822 402 10147	MOUNTING PIECE
51	4822 459 11055	WORD MARK
52	4822 535 10242	POWER ROD
53	4822 410 10284	VOLUME KNOB
54	4822 492 51374	SPRING
65	4822 444 10177	TRAY FRONT
151	4822 444 83843	COVER
251→252	4822 462 10667	FOOT SILVER
253→254	4822 462 10668	FOOT BLACK
255→258	4822 532 12419	FELT
283 ⚠	4822 532 83948	BUSHING
308	4822 321 22832	CINCH CABLE SBC1072
365	4822 218 10664	REMOTE CONTROL RH8808/01

Not mentioned parts are only available during production period on special request.

SCREWS

DESCRIPTION	MEASURE	ITEM NUMBER(S)	FIXATION
selftapper for plastic	3x10	22, 23	knob units - front
		39, 40, 41	headphone PCB - front
		196, 197, 198	monoboard - loading
		268	analogue cinch - backplate
		273	digital cinch - backplate
	3x12	24,25,26,27,28,29,30,31	display PCB - front
		32, 33, 34	mounting piece - front
		35	IR PCB - front
selftapper for metal	3x6 with washer	75, 76, 77	front - frame
		171,172,173,174,175,176	cover - frame
		191,192	trafo - frame
		269,270,271,272	backplate - frame
	M3x6	83,84,85	loading - frame
	M3x15	259,283,261,262	foot - frame
	3x16 with washer	193	switch PCB - frame
	M3x28	194,195	monoboard - frame

ELECTRICAL PARTS LIST

MAIN PANEL

MISCELLANEOUS

1000	4822 242 73557	RESONATOR 8.46MHz
1050	5322 242 73686	RESONATOR 12MHz
1101	4822 242 81705	RESONATOR 33.8MHz
1250	4822 267 31729	DIGITAL OUT SOCKET
1300	4822 267 31731	ANALOG OUT SOCKET
1510 ⚠	4822 071 51002	FUSE RAD T 1A
1511 ⚠	4822 071 51002	FUSE RAD T 1A
1530 ⚠	4822 276 13489	MAINS SWITCH

CAPACITORS

2000	4822 122 10466	220pF 10% 50V
2001	4822 122 10466	220pF 10% 50V
2002	4822 122 10466	220pF 10% 50V
2003	4822 122 10466	220pF 10% 50V
2004	4822 122 10466	220pF 10% 50V
2005	4822 122 10466	220pF 10% 50V
2006	4822 126 12878	1,5nF 10% 16V
2007	4822 122 10459	583pF10% 50V
2008	5322 124 21643	22μF 20% 40V
2009	4822 126 11585	22nF +80-20%25V
2010	4822 126 11585	22nF +80-20%25V
2011	5322 124 21643	22μF 20% 40V
2012	4822 126 11585	22nF +80-20%25V
2013	5322 124 21643	22μF 20%40V
2014	4822 126 12785	47nF TUB 50V
2025	5322 124 21643	22μF 20% 40V
2040	4822 126 10053	180pF 10%Y5P
2041	4822 126 10053	180pF 10%Y5P
2042	4822 126 12787	330pF 10%50V
2043	4822 122 33848	47pF 5%SL 50V
2044	4822 122 33848	47pF 5%SL 50V
2045	4822 122 33195	100pF 10% 50V
2046	4822 126 12573	18pF5%50V
2047	5322 124 21643	22μF20%40V
2048	4822 126 12787	330pF 10%50V
2049	4822 126 10053	180pF 10%Y5P
2050	4822 122 10466	220pF 10%50V
2051	4822 126 11585	22nF +80-20%25V
2052	5322 124 21643	22μF20%40V
2083	4822 126 12882	100nF +80-20% 50V
2062	4822 126 12882	100nF +80-20% 50V
2063	5322 121 42489	33nF 5% 250V
2064	4822 126 12882	100nF +80-20% 50V
2066	4822 126 12339	2,2nF 10% Y5Ω
2067	4822 126 12882	100nF +80-20% 50V
2068	4822 126 12148	2,7nF 10%
2069	4822 126 10053	180pF 10%Y5P
2071	4822 126 12882	100nF +80-20% 50V
2072	4822 126 12882	100nF +80-20% 50V
2074	4822 126 12882	100nF +80-20% 50V
2075	4822 126 13151	3,9nF 10%Y5Ω16V
2076	4822 126 10053	180pF 10%Y5P
2100	4822 126 12339	2,2nF 10% Y5Ω
2101	4822 122 33848	47pF 5%SL 50V
2102	4822 126 11585	22nF 80-20% 25V
2103	5322 121 42386	100nF 5% 63V
2105	4822 122 33195	100pF 10% 50V
2109	4822 122 33191	22pF 5% 50V
2110	5322 124 21643	22μF 20% 40V
2111	4822 126 12882	100nF 80 -20% 50V
2112	4822 122 33191	22pF 5%SL 50V
2113	4822 122 33847	10pF 5%NP0 50V
2114	4822 122 33197	1nF 10% 50V
2115	4822 126 11585	22nF +80-20% 25V
2116	5322 124 21643	22μF 20% 40V
2117	4822 126 11585	22nF +80-20% 25V
2118	4822 122 33848	47pF 5%SL 50V
2140	4822 126 12785	47nF TUB 50V
2141	4822 126 12882	100nF +80-20% 50V
2142	4822 122 33848	47pF 5%SL 50V
2251	4822 124 41579	10μF 20% 50V
2253	4822 126 12882	100nF +80-20% 50V
2300	4822 122 33519	470pF 10% 50V
2301	4822 122 33519	470pF 10% 50V
2302	4822 124 40433	47μF 20% 25V
2303	4822 124 40433	47μF 20% 25V
2304	4822 122 10573	56pF 5% 50V
2305	4822 122 10573	56pF 5% 50V
2306	4822 124 80408	4,7μF 20% 50V
2307	4822 124 80408	4,7μF 20% 50V
2308	4822 122 10466	220pF 10% 50V
2309	4822 122 10466	220pF 10% 50V
2310	4822 124 40433	47μF 20% 25V
2330	4822 126 12882	100nF +80-20% 50V
2331	4822 124 40433	47μF 20% 25V
2332	4822 126 12882	100nF +80-20% 50V
2333	4822 124 40433	47μF 20% 25V
2334	4822 126 12882	100nF +80-20% 50V
2335	4822 124 40433	47μF 20% 25V
2336	4822 126 12882	100nF +80-20% 50V
2337	4822 124 40433	47μF 20% 25V
2339	4822 124 40433	47μF 20% 25V
2531	4822 126 11585	22nF +80-20% 25V
2532	4822 126 11585	22nF +80-20% 25V
2533	4822 126 11585	22nF +80-20% 25V
2534	4822 126 11585	22nF +80-20% 25V
2535	4822 126 12882	100nF +80-20% 50V
2536	4822 124 41458	4700μF 20% 16V
2538	4822 124 80294	3300μF 20% 16V
2540	5322 124 22094	220μF 20% 50V
2541	4822 126 12882	100nF +80-20% 50V
2542	4822 124 40184	1000μF 20% 10V

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2583		4822 124 40849	330µF 20% 16V
2830		4822 126 12882	100nF +80-20% 50V
2831		4822 126 11585	22nF +80-20% 25V
2832		4822 126 11585	22nF +80-20% 25V
2701		4822 126 11585	22nF +80-20% 25V
2703		4822 126 11585	22nF +80-20% 25V

RESISTORS

3000		4822 116 83864	10k 5% 0,5W
3001		4822 116 83864	10k 5% 0,5W
3002		4822 116 83864	10k 5% 0,5W
3003		4822 116 83864	10k 5% 0,5W
3004		4822 116 83864	10k 5% 0,5W
3005		4822 116 83864	10k 5% 0,5W
3006		4822 050 11002	1k 1% 0,4W
3007		4822 050 11002	1k 1% 0,4W
3010		4822 116 52235	1M 5% 0,5W
3011		4822 116 83864	10k 5% 0,5W
3012		4822 116 52219	330Ω 5% 0,5W
3013		4822 050 11002	1k 1% 0,4W
3014		4822 116 83864	10k 5% 0,5W
3015		4822 116 52219	330Ω 5% 0,5W
3020		4822 050 11002	1k 1% 0,4W
3021		4822 116 83864	10k 5% 0,5W
3022	⚠	4822 052 10478	4Ω7 5% 0,33W
3040		4822 116 52239	120k 5% 0,5W
3041		4822 116 52239	120k 5% 0,5W
3042		4822 116 52291	56k 5% 0,5W
3043		4822 050 11002	1k 1% 0,4W
3044		4822 116 52222	390Ω 5% 0,5W
3045		4822 116 52175	100Ω 5% 0,5W
3046		4822 116 52249	1k8 5% 0,5W
3047		4822 116 52276	3k9 5% 0,5W
3048		4822 116 52175	100Ω 5% 0,5W
3049		4822 116 52249	1k8 5% 0,5W
3050		4822 116 52223	430Ω 5% 0,5W
3051		4822 116 52223	430Ω5% 0,5W
3052		4822 050 11002	1k 1% 0,4W
3053		4822 116 52267	30k 5% 0,5W
3054		4822 116 52272	330k 5% 0,5W
3055		4822 116 52175	100Ω 5% 0,5W
3056		4822 050 11002	1k 1% 0,4W
3057		4822 116 83882	39k 5% 0,5W
3058		4822 116 52175	100Ω 5% 0,5W
3059		4822 116 52284	47k 5% 0,5W
3083		4822 116 83864	10k 5% 0,5W
3062	⚠	4822 052 10229	22Ω 5% 0,33W
3064		4822 116 52296	6k8 5% 0,5W
3065		4822 050 27502	7k5 1% 0,6W
3066		4822 050 21503	15k 1% 0,6W
3067		4822 116 52244	15k 5% 0,5W
3068	⚠	4822 052 10229	22Ω 5% 0,33W
3069		4822 116 83864	10k 5% 0,5W
3070		4822 116 52244	15k 5% 0,5W
3071		4822 116 52296	6k8 5% 0,5W
3072		4822 116 83864	10k 5% 0,5W
3073		4822 116 52244	15k 5% 0,5W
3074	⚠	4822 052 10229	22Ω 5% 0,33W
3075		4822 116 83864	10k 5% 0,5W
3076		4822 116 52283	4k7 5% 0,5W
3077		4822 116 52296	6k8 5% 0,5W
3078		4822 116 52244	15k 5% 0,5W
3079		4822 116 52244	15k 5% 0,5W
3100		4822 116 52256	2k2 5% 0,5W
3101		4822 116 52257	22k 5%0,5W
3107		4822 116 52219	330Ω 5% 0,5W
3108		4822 116 52215	220Ω 5% 0,5W
3109		4822 116 52215	220Ω 5% 0,5W
3110		4822 116 52215	220Ω 5% 0,5W
3111		4822 116 52215	220Ω 5% 0,5W
3112		4822 116 52175	100Ω 5% 0,5W
3113	⚠	4822 052 10338	3Ω3 5% 0,33W
3114		4822 116 52235	1M 5% 0,5W
3115	⚠	4822 052 10338	3Ω3 5% 0,33W
3116		4822 116 52175	100Ω 5% 0,5W
3117		4822 116 52256	2k2 5% 0,5W
3140		4822 116 52271	33k 5% 0,5W
3141		4822 116 52271	33k 5% 0,5W
3142		4822 116 52271	33k 5% 0,5W
3143		4822 116 52234	100k 5% 0,5W
3144		4822 116 52234	100k 5% 0,5W
3145	⚠	4822 052 10229	22Ω 5% 0,33W
3146		4822 116 52175	100Ω 5% 0,5W
3147		4822 116 52283	4k7 5% 0,5W
3252		4822 116 52199	68Ω 5% 0,5W
3302		4822 116 83864	10k 5% 0,5W
3303		4822 116 83864	10k 5% 0,5W
3304		4822 116 52244	15k 5% 0,5W
3305		4822 116 52244	15k 5% 0,5W
3306		4822 116 52257	22k 5% 0,5W
3307		4822 116 52257	22k 5% 0,5W
3308		4822 050 11002	1k 1% 0,4W
3309		4822 050 11002	1k 1% 0,4W
3330	⚠	4822 052 10338	3Ω3 5% 0,33W
3331	⚠	4822 052 10338	3Ω3 5% 0,33W
3332	⚠	4822 052 10338	3Ω3 5% 0,33W
3333	⚠	4822 052 10478	4Ω7 5% 0,33W
3334	⚠	4822 052 10478	4Ω7 5% 0,33W
3383		4822 116 52284	47k 5% 0,5W
3361		4822 116 52284	47k 5% 0,5W
3362		4822 116 83874	220k 5% 0,5W
3363		4822 116 83874	220k 5% 0,5W
3364		4822 116 52256	2k2 5% 0,5W
3365		4822 116 52256	2k2 5% 0,5W

3366	4822 116 52256	2k2 5% 0,5W
3367	4822 116 52256	2k2 5% 0,5W
3368	4822 116 83864	10k 5% 0,5W
3369	4822 116 83864	10k 5% 0,5W
3376	4822 050 11002	1k 1% 0,4W
3377	4822 050 11002	1k 1% 0,4W
3500	4822 116 52211	150Ω 5% 0,5W
3501	4822 050 11002	1k 1% 0,4W
3502	4822 116 52257	22k 5% 0,5W
3503	4822 116 52257	22k 5% 0,5W
3540	4822 116 52284	47k 5% 0,5W
3541	4822 116 52207	1k2 5% 0,5W
3542	4822 116 52283	4k7 5% 0,5W
3543	4822 116 52283	4k7 5% 0,5W
3544	4822 116 52257	22k 5% 0,5W
3545 ⚠	4822 052 10478	4Ω7 5% 0,33W
3583	4822 050 11002	1k 1% 0,4W
3562	4822 116 52283	4k7 5% 0,5W
3563	4822 116 52283	4k7 5% 0,5W
3831	4822 116 52238	12k 5% 0,5W
3832	4822 116 52238	12k 5% 0,5W
3833 ⚠	4822 052 10229	22Ω 5% 0,33W
3834	4822 116 52303	8k2 5% 0,5W
3836	4822 116 52238	12k 5% 0,5W
3837	4822 116 52238	12k 5% 0,5W
3700	4822 116 83874	220k 5% 0,5W
3701	4822 116 52257	22k 5% 0,5W
3703	4822 116 52257	22k 5% 0,5W
3706	4822 116 52257	22k 5% 0,5W
3707	4822 116 52257	22k 5% 0,5W
3708	4822 116 52257	22k 5% 0,5W
3709	4822 116 52257	22k 5% 0,5W
3710	4822 116 52257	22k 5% 0,5W
3711	4822 116 52257	22k 5% 0,5W
3714	4822 116 52257	22k 5% 0,5W
3715	4822 116 83864	10k 5% 0,5W
3716	4822 050 11002	1k 1% 0,4W
3717	4822 050 11002	1k 1% 0,4W
3718	4822 050 11002	1k 1% 0,4W
3719	4822 050 11002	1k 1% 0,4W
3720	4822 050 11002	1k 1% 0,4W
3723	4822 116 52257	22k 5% 0,5W

COILS

5010	4822 157 62552	2,2μH
5100	4822 157 62552	2,2μH
5250	4822 157 70831	DIG. OUT TRANSFO

DIODES

6383	4822 130 30621	1N4148
6361	4822 130 30621	1N4148
6500	4822 130 31981	BZX79-C3V9
6535	5322 130 30684	1N4002GP
6536	5322 130 30684	1N4002GP
6537	5322 130 30684	1N4002GP
6538	5322 130 30684	1N4002GP
6540	4822 130 83362	1N4004GP
6541	4822 130 34278	BZX79-C6V8
6542	4822 130 30621	1N4148
6543	5322 130 30684	1N4002GP
6544	4822 130 30621	1N4148
6583	5322 130 30684	1N4002GP
6561	5322 130 30684	1N4002GP
6562	4822 130 31981	BZX79-C3V9

TRANSISTORS & IC'S

7000	4822 209 31064	TDA1301T/N1
7040	4822 130 40902	BF240
7041	4822 130 40937	BC548B
7042	4822 130 44197	BC558B
7043	4822 130 40937	BC548B
7044	4822 130 40937	BC548B
7083	4822 209 72587	TCA0372
7061	4822 209 72587	TCA0372
7100	4822 209 33339	SAA7345GP/M5
7300	4822 209 33252	TDA1549T/N1
7301	4822 209 83274	NJM4583D
7383	4822 130 44197	BC558B
7361	4822 130 44197	BC558B
7362	4822 130 41344	BC337-40
7363	4822 130 41344	BC337-40
7364	4822 130 41344	BC337-40
7365	4822 130 41344	BC337-40
7500	4822 130 44197	BC558B
7535	4822 209 80817	L7805CV
7540	5322 209 62115	MC79L15AC
7541	4822 130 40937	BC548B
7542	4822 130 41344	BC337-40
7543	4822 130 44197	BC558B
7583	4822 130 44197	BC558B
7830	4822 209 72587	TCA0372
7700	4822 900 10666	MC68HC11ER31/P158.08

DISPLAY & HEADPHONE PANEL

MISCELLANEOUS

	4822 256 92151	DISPLAY HOLDER
1020	4822 276 13114	TACT SWITCH
1021	4822 276 13114	TACT SWITCH
1022	4822 276 13114	TACT SWITCH
1023	4822 276 13114	TACT SWITCH
1024	4822 276 13114	TACT SWITCH
1025	4822 276 13114	TACT SWITCH
1026	4822 276 13114	TACT SWITCH
1027	4822 276 13114	TACT SWITCH
1028	4822 276 13114	TACT SWITCH
1029	4822 276 13114	TACT SWITCH
1030	4822 276 13114	TACT SWITCH
1031	4822 276 13114	TACT SWITCH
1032	4822 276 13114	TACT SWITCH
1033	4822 276 13114	TACT SWITCH
1034	4822 276 13114	TACT SWITCH
1035	4822 276 13114	TACT SWITCH
1036	4822 276 13114	TACT SWITCH
1037	4822 276 13114	TACT SWITCH
1038	4822 276 13114	TACT SWITCH
1039	4822 276 13114	TACT SWITCH
1040	4822 214 52009	IR RECEIVER GP1U58XP
1041	4822 276 13114	TACT SWITCH
1042	4822 276 13114	TACT SWITCH
1043	4822 276 13114	TACT SWITCH
1044	4822 276 13114	TACT SWITCH
1045	4822 276 13114	TACT SWITCH
1046	4822 276 13114	TACT SWITCH
1047	4822 276 13114	TACT SWITCH
1371	4822 267 31453	HEADPHONE SOCKET
1450	4822 130 91329	DISPLAY 8-BT-153GK
1502	4822 242 72527	RESONATOR 4MHz

CAPACITORS

2002	5322 124 21643	22µF 20% 40V
2003	4822 126 11585	22nF +80-20%25V
2370	4822 126 11585	22nF +80-20%25V
2371	4822 122 33197	1nF 10% 50V
2372	4822 122 33197	1nF 10% 50V
2373	4822 122 33197	1nF 10% 50V

RESISTORS

3370	4822 101 21199	10kX2 20% 0,025W
3371	4822 116 83864	10k 5% 0,5W
3372	4822 116 83864	10k 5% 0,5W
3373	4822 116 52244	15k 5% 0,5W
3374	4822 116 52244	15k 5% 0,5W
3375	4822 116 52206	120Ω 5% ,5W
3386	4822 116 52206	120Ω 5% 0,5W
3400	4822 116 52284	47k 5% 0,5W
3401	4822 116 52257	22k 5% 0,5W
3402	4822 116 52257	22k 5% 0,5W
3403	4822 116 52257	22k 5% 0,5W
3404	4822 116 52257	22k 5% 0,5W
3409	4822 116 52257	22k 5% 0,5W
3410	4822 116 52257	22k 5% 0,5W
3411	4822 116 83874	220k 5% 0,5W

DIODES, TRANSISTORS & I.C.'s

6400	4822 130 30613	BAW62
6401	4822 130 30613	BAW62
6402	4822 130 30613	BAW62
6403	4822 130 30613	BAW62
6404	4822 130 30613	BAW62
6405	4822 130 30613	BAW62
6406	4822 130 30613	BAW62
7370	4822 209 83274	NJM4583D
7400	4822 209 30249	TMP47C212AN

MAINS VOLTAGE

5001/00 ⚠	4822 146 31337	MAINS TRANSFO /00
5001/01 ⚠	4822 146 31338	MAINS TRANSFO /01
5001/06 ⚠	4822 146 31345	MAINS TRANSFO /06

COMPACT DISC MECHANISM

CDM12.1

A96-350

Service
Service
Service

Product Service Group CE Audio

Service Information

This Service Information is valid for the following typenumbers:
AS440, AS445, AS450, AS455, AS540, AS545, AS550, AS640, AS641, AS642, AS645, AS650, AS655, AZ8040, CD60, CD70, CD80, CD91, CD163, CD165, CD410, CD690/2x, CD692/2x, CD710, CD720, CD730, CD732, CD733, CD740, CD750, CD910, CD911, CD920, CD921, CDC263, CDC265, CDC745, CDC751, CDC794, CDC796, CDC915, CDC916, CDC925, CDC926, CDC935, CDC936, CS1600, CS2600, FW14, FW15, FW20, FW21, FW30, FW31, FW36, FW40, FW41, FW54, FW56, FW70, FW80, and all future sets using the CDM12.1.

CHARGED CAPACITORS ON THE SERVO BOARD MAY DAMAGE THE CDM-ELECTRONICS WHEN CONNECTING A NEW CDM MECHANISM. THAT´S WHY, BESIDES THE SAFETY MEASURES LIKE
- *SWITCH OFF POWER SUPPLY*
- *ESD PROTECTION*

ADDITIONAL ACTIONS MUST BE TAKEN BY THE REPAIR TECHNICIAN.

The following steps have to be done when replacing the CDM mechanism:

1. Disconnect old CDM flexfoil from printed board
2. Connect paperclip to CDM flexfoil to short-circuit flexfoil (fig.1)
3. Short-circuit printed board with **brass-sheet (4822 321 11197)** plugged into the flexfoil connector (fig.2)
4. Remove old CDM mechanism
5. Position new CDM mechanism in its studs
6. Remove short-circuit from printed board connector
7. Remove short-circuit from flexfoil of new CDM
8. Connect new flexfoil to print connector (fig.3)

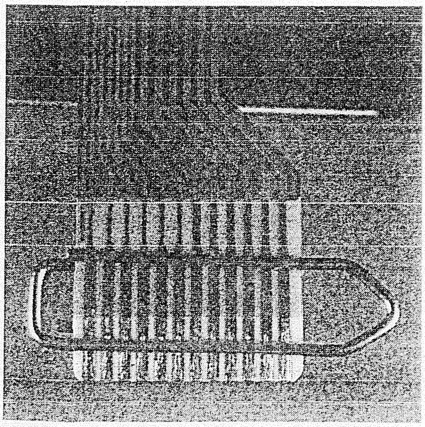

fig.1

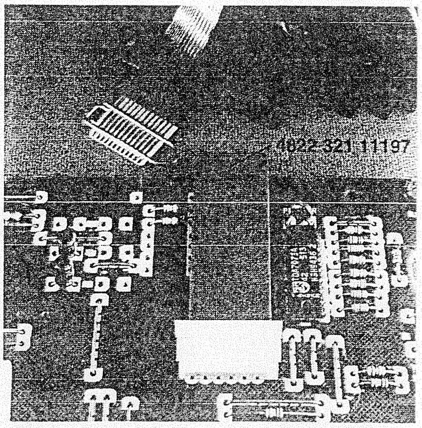

fig.2

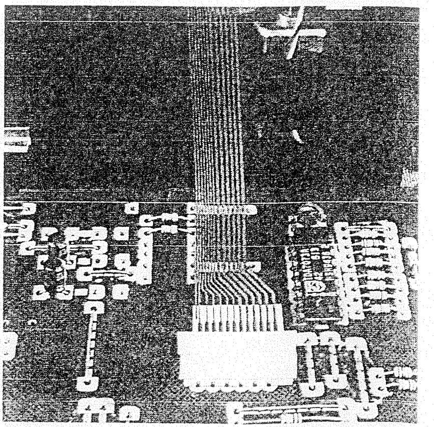

fig.3